**

TIGARD CITY COUNCIL
MEETING

January 8, 2002 6:30 p.m.

TIGARD CITY HALL
13125 SW HALL BLVD
TIGARD, OR 97223

CITY OF TIGARD
OREGON

PUBLIC NOTICE:

Anyone wishing to speak on an agenda item should sign on the appropriate sign-up sheet(s). If no sheet is available, ask to be recognized by the Mayor at the beginning of that agenda item. Visitor's Agenda items are asked to be two minutes or less. Longer matters can be set for a future Agenda by contacting either the Mayor or the City Manager.

Times noted are estimated; it is recommended that persons interested in testifying be present by 7:15 p.m. to sign in on the testimony sign-in sheet. Business agenda items can be heard in any order after 7:30 p.m.

Assistive Listening Devices are available for persons with impaired hearing and should be scheduled for Council meetings by noon on the Monday prior to the Council meeting. Please call 503-639-4171, Ext. 309 (voice) or 503-684-2772 (TDD - Telecommunications Devices for the Deaf).

Upon request, the City will also endeavor to arrange for the following services:

- Qualified sign language interpreters for persons with speech or hearing impairments; and

- Qualified bilingual interpreters.

Since these services must be scheduled with outside service providers, it is important to allow as much lead time as possible. Please notify the City of your need by 5:00 p.m. on the Thursday preceding the meeting by calling: 503-639-4171, x309 (voice) or 503-684-2772 (TDD - Telecommunications Devices for the Deaf).

SEE ATTACHED AGENDA

A G E N D A
TIGARD CITY COUNCIL MEETING
January 8, 2002

6:30 PM

- STUDY SESSION

  > COUNCIL GOAL SETTING PREVIEW AND MATERIAL DISTRIBUTION

- EXECUTIVE SESSION: The Tigard City Council may go into Executive Session. If an Executive Session is called to order, the appropriate ORS citation will be announced identifying the applicable statue. All discussions are confidential and those present may disclose nothing from the Session. Representatives of the news media are allowed to attend Executive Sessions, as provided by ORS 192.660(3), but must not disclose any information discussed. No Executive Session may be held for the purpose of taking any final action or making any final decision. Executive Sessions are closed to the public.

7:30 PM

1. BUSINESS MEETING
   - 1.1 Call to Order - City Council & Local Contract Review Board
   - 1.2 Roll Call
   - 1.3 Pledge of Allegiance
   - 1.4 Council Communications & Liaison Reports
   - 1.5 Call to Council and Staff for Non-Agenda Items

7:35 PM

2. VISITOR'S AGENDA (Two Minutes or Less, Please)

- Tigard High School Student Envoy Nathan Leamy

7:40 PM

3. CONSENT AGENDA: These items are considered to be routine and may be enacted in one motion without separate discussion. Anyone may request that an item be removed by motion for discussion and separate action. Motion to:

   - 3.1 Approve Council Minutes: November 13, 2001
   - 3.2 Receive & File:
     - a. Council Calendar
     - b. Tentative Agenda
   - 3.3 Approve a Revision to Resolution 00-08, Citywide Personnel Policies, Article 45, Electronic Communication – Resolution No. 02 - _____

3.4 Approve the City's Updated Investment Policy – Resolution No. 02 - _____

3.5 Approve an Application for a Metro/US Fish and Wildlife Service Grant for Implementation of the Fanno Creek Park Enhancement Plan – Resolution No. 02 - _____

- *Consent Agenda - Items Removed for Separate Discussion: Any items requested to be removed from the Consent Agenda for separate discussion will be considered immediately after the Council has voted on those items which do not need discussion.*

7:45 PM

4. STATE OF THE CITY ADDRESS
   - Mayor

8:05 PM

5. EXECUTIVE SUMMARY
   - City Manager

8:25 PM

6. TIGARD BEYOND TOMORROW VISION 2001 REPORT
   - Staff Report: Administration Staff

8:40 PM

7. LIBRARY UPDATE
   a. Staff Report: Library Staff
   b. Council Discussion

8:55 PM

8. PUBLIC HEARING (QUASI-JUDICIAL) – ZONE CHANGE ANNEXATION (ZCA) 2001-00001 PACIFIC CREST ANNEXATION

The applicant is requesting to annex seven (7) parcels consisting of 28.83 acres into the City of Tigard. The City is also considering to annex two (2) additional parcels in conjunction with this application containing a portion of 2S109BC, Tax Lot 7000 (BPA Power line) and all of 2S105DD, Tax Lot 2200. **LOCATION:** Washington County Tax Assessor's Map 2S105DD, Tax Lots 100, 201, 1900, 2000, 2100 and 2200; 2S105DA, Tax Lots 400 and 500; and 2S109BC, Tax Lot 7000. **ZONE:** R-7: Medium-Density Residential District. **APPLICABLE REVIEW CRITERIA:** The approval standards for annexations are set out in Community Development Code Chapters 18.320.020 and 18.390, Comprehensive Plan Policies 2 and 10; ORS Chapter 222; and Metro Code Chapter 3.09.

a. Open Public Hearing
b. Declarations or Challenges

c. Staff Report: Community Development Department
d. Public Testimony (Proponents, Opponents, Rebuttal)
e. Staff Recommendation
f. Council Discussion
g. Close Public Hearing
h. Council Consideration: Option No. _____, Ordinance No. 02 - _____

9:05 PM

9. PUBLIC HEARING (QUASI-JUDICIAL) – ZONE CHANGE ANNEXATION (ZCA) 2001-00002 DAFFODIL HILL ANNEXATION

The applicant is requesting to annex one (1) parcel of 3.16 acres into the City of Tigard. **LOCATION:** 13735 SW Bull Mountain Road; WCTM 2S109BA, Tax Lot 1400. **ZONE:** R-7: Medium-Density Residential District. **APPLICABLE REVIEW CRITERIA:** The approval standards for annexations are set out in Community Development Code Chapters 18.320.020 and 18.390, Comprehensive Plan Policies 2 and 10; ORS Chapter 222; and Metro Code Chapter 3.09.

a. Open Public Hearing
b. Declarations or Challenges
c. Staff Report: Community Development Department
d. Public Testimony (Proponents, Opponents, Rebuttal)
e. Staff Recommendation
f. Council Discussion
g. Close Public Hearing
h. Council Consideration: Ordinance No. 02 - _____

9:20 PM

10. PUBLIC HEARING (LEGISLATIVE) – ADOPTING THE TRANSPORTATION SYSTEM PLAN AND AMENDING THE COMPREHENSIVE PLAN

a. Open Public Hearing
b. Staff Report: Community Development Department
c. Public Testimony
d. Staff Recommendation
e. Council Discussion
f. Close Public Hearing
g. Council Consideration: Ordinance No. 02 - _____

9:35 PM

11. CONSIDER AN ORDINANCE AMENDING CHAPTER 13.04 OF THE TIGARD MUNICIPAL CODE PERTAINING TO LOCAL IMPROVEMENTS, GENERAL PROCEDURES
    a. Staff Report: Engineering & Finance Departments
    b. Council Discussion
    c. Council Consideration: Ordinance No. 02 - _____

9:45 PM

12. COUNCIL LIAISON REPORTS

9:50 PM

13. NON AGENDA ITEMS

9:55 PM

14. EXECUTIVE SESSION: The Tigard City Council may go into Executive Session. If an Executive Session is called to order, the appropriate ORS citation will be announced identifying the applicable statue. All discussions are confidential and those present may disclose nothing from the Session. Representatives of the news media are allowed to attend Executive Sessions, as provided by ORS 192.660(3), but must not disclose any information discussed. No Executive Session may be held for the purpose of taking any final action or making any final decision. Executive Sessions are closed to the public.

10:00 PM

15. ADJOURNMENT

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Agenda Item No. 3.1
Meeting of January 8, 2002

MINUTES
TIGARD CITY COUNCIL MEETING
NOVEMBER 13, 2001

- STUDY SESSION

Present: Mayor Griffith; Councilors Dirksen, Moore, Patton, and Scheckla

Mayor Griffith called the meeting to order at 6:42 p.m.

> POLICE CONSOLIDATION SURVEY RESULTS UPDATE

Chief of Police Ron Goodpaster briefed the City Council on this issue. He noted that information was given to the Council in June and October. Mr. Goodpaster reviewed the poll results of what is known as the "Hibbits" report. The Chief is concerned with consolidation at this time because of the following issues:

- Cost factors have not been fleshed out.
- Service levels have not been reviewed.
- Community control issues have not been addressed.
- Local identity issues should be considered.

Mr. Goodpaster referred to a report called the "Cogan report" where six key areas of law enforcement were reviewed. Mr. Goodpaster noted that he is not convinced that consolidation is in the citizens' best interest. He advised that more information would likely be presented through the media soon. He reviewed several of the steps that Washington County jurisdictions have already put in place to share and make good use of resources (cooperation and partnerships). Examples include Washington County Consolidated Communications Agency (WCCCA), which is the regional dispatching agency, and also the Tactical Negotiations Team (TNT), which consists of shared personnel for major incidents.

Mr. Goodpaster noted the efforts in the local community, which includes crime prevention, education, and community policing. He referred to administrative support through cooperative efforts among Washington County agencies, which includes a uniform hiring process, consistency in forms (paperwork), and the sharing of information.

Mr. Goodpaster said interagency training is also offered.

> BULL MOUNTAIN ANNEXATION DRAFT STUDY COMMENTS

Information about this matter was distributed to City Council. This item will be reviewed at the November 20 and 27 Council meetings. During these meetings, Council will be reviewing and eventually will need to have a policy discussion on whether to proceed with annexation efforts on Bull Mountain.

> REQUEST FOR NON AGENDA ITEMS (ITEM NO. 13)

The following items were noted for discussion during the Non-Agenda portion of the Council meeting:

- The League of Oregon Cities and City/County Insurance Safety Award.
- Resolution of Appreciation to Robert J. Wheeler – 30 years of service to the City of Tigard.
- Resolution of Appreciation to Robert L. Thompson – 30 years of service to the City of Tigard.

> ADMINISTRATIVE ITEMS

- Goal-Setting Meeting: City Manager Monahan asked the City Council if January 14 or 21, 2002, were available dates for the City Council to meet in a goal-setting session. At this time, both dates were available to the Council members.
- Oregon Electric Group Letter – This letter was distributed to the City Council regarding a quote for providing electricity to a tree in Liberty Park for the Holiday Tree Lighting.

Meeting recessed: 7:24 p.m.

1. BUSINESS MEETING

1.1 Mayor Griffith called the City Council & Local Contract Review Board to order at 7:36 p.m.

1.2 Roll Call: Mayor Griffith and Councilors Dirksen, Moore, Patton, and Scheckla were present.

1.3 Pledge of Allegiance

1.4 Council Communications & Liaison Reports: None.

1.5 Call to Council and Staff for Non-Agenda Items

City Manager Monahan reviewed the non-agenda items to be added to Item No. 13:

- The League of Oregon Cities and City/County Insurance Safety Award.
- Resolution of Appreciation to Robert J. Wheeler – 30 years of service Resolution of Appreciation to Robert L. Thompson – 30 years of service

2. VISITOR'S AGENDA (Two Minutes or Less, Please)

- Tigard High School Student Envoy Nathan Leamy distributed a report to the City Council highlighting activities of students at Tigard High School.
- Jack Polans, 16000 SW Queen Victoria, King City, Oregon, noted concerns about terrorism. He asked the Mayor and Council to form a separate committee dealing with terrorists.
- Tyler Ellenson, Tigard Central Business District Association announced that there will be a holiday tree lighting at Liberty Park from 7-8:30 p.m. on Friday, November 30. He invited the Mayor and Council to attend and say a few words during the program. He advised there is a need for permanent electrical power to the tree at Liberty Park, which will be used for the tree lighting event. Mr. Ellenson referred to a letter from Oregon Electric Group quoting the cost for the electrical work would be $4,949. There is approximately $26,600 remaining in the budget allocated to assist the Tigard downtown area. He requested that funds be authorized to be expended from this budget for the electrical power.

  Mr. Ellenson described some of the activities planned for the holiday tree lighting event. After brief discussion, consensus of the City Council was to proceed with the expenditure of funds for electrical power as requested.

3. CONSENT AGENDA:

Motion by Councilor Scheckla, seconded by Councilor Dirksen, to approve the Consent Agenda as follows:

3.1 Approve Council Minutes for August 28 and September 18, 2001

3.2 Receive and File:

a. Council Calendar

b. Tentative Agenda

3.3 Appoint Bret A. Johnson as a Tree Board Member and Brooks Gaston as a Tree Board Alternate – Resolution No. 01-67

3.4 Approve City Manager's Recommendations for Representation on the Cooperative Library Advisory Board – Resolution No. 01-68

3.5 Local Contract Review Board

a. Award Bid for the Construction of the SW Gaarde Street Pressure Reducing Valve Vault (CIP No. W01-101) to W.G. Moe & Sons

The motion was approved by a unanimous vote of Council present:

Mayor Griffith -	Yes
Councilor Dirksen -	Yes
Councilor Moore -	Yes
Councilor Patton -	Yes
Councilor Scheckla -	Yes

4. CONSIDER AMENDMENT TO CHAPTER 5.12 OF THE TIGARD MUNICIPAL CODE PERTAINING TO REGULATION AND ADMINISTRATION OF THE CABLE SYSTEM

Assistant to the City Manager Liz Newton presented the staff report, which is on file in the City Recorder's office. The staff report summarized the proposed amendments that would delete details regarding cable franchise selection and administration and add some definitions.

Motion by Councilor Moore, seconded by Councilor Patton, to adopt Ordinance No. 01-20.

ORDINANCE NO. 01-20 – AN ORDINANCE AMENDING CHAPTER 5.12 OF THE TIGARD MUNICIPAL CODE PERTAINING TO REGULATION AND ADMINISTRATION OF THE CABLE SYSTEM.

The motion was approved by a unanimous vote of Council present:

Mayor Griffith -	Yes
Councilor Dirksen -	Yes
Councilor Moore -	Yes
Councilor Patton -	Yes
Councilor Scheckla -	Yes

5. INTRODUCE BRET A. JOHNSON AS NEWLY APPOINTED TREE BOARD MEMBER AND BROOKS GASTON AS NEWLY APPOINTED TREE BOARD ALTERNATE

Mayor Griffith welcomed Mr. Bret Johnson to the Tree Board. Mr. Brooks Gaston, Tree Board Alternate was unable to attend the meeting.

6. PUBLIC HEARING - CONSIDER AUTHORIZING A LOAN FROM THE SPECIAL PUBLIC WORKS FUND BY ENTERING INTO A LOAN CONTRACT WITH THE OREGON ECONOMIC AND COMMUNITY DEVELOPMENT DEPARTMENT

a. Mayor Griffith opened the public hearing.

b. Finance Director Craig Prosser presented the staff report. A copy of the written report presented to the City Council is on file with the City Recorder. The issue before the Council was whether the City Council should authorize the City to take out a loan from the Oregon Economic and Community Development Department (OECDD) to finance the Cook Park improvement project over a ten-year period.

c. Public Testimony: No one signed in to testify.

d. Council Questions/Comments

After presenting the Staff Report, Mr. Prosser clarified several items for Council members including the fact that money will be provided to the City of Tigard from this loan on a reimbursement basis. This means the City will need to "front" the costs of the improvements. Because of the loan, the City will be able to complete improvements to Cook Park in 2002.

e. Mayor Griffith closed the public hearing.

f. Motion by Councilor Moore, seconded by Councilor Scheckla, to adopt Resolution No. 01-68.

RESOLUTION NO. 01-68 – A RESOLUTION AUTHORIZING A LOAN FROM THE SPECIAL PUBLIC WORKS FUND BY ENTERING INTO A LOAN CONTRACT WITH THE OREGON ECONOMIC AND COMMUNITY DEVELOPMENT DEPARTMENT.

The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

7. INFORMATIONAL PUBLIC HEARING - FINALIZE FORMATION OF SANITARY SEWER REIMBURSEMENT DISTRICT NO. 18 ESTABLISHED TO INSTALL SEWERS IN SW WALNUT STREET AND SW 121ST AVENUE

a. Mayor Griffith opened the public hearing.
b. Project Engineer Greg Berry presented the staff report, which is on file in the City Recorder's office.
c. Public Testimony: None.
d. Mayor Griffith closed the public hearing.
e. Motion by Councilor Moore, seconded by Councilor Patton, to approve the finalization of Sanitary Sewer Reimbursement District No. 18.

The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

Agenda Item No. 9 was heard at this time.

8. REVIEW UPDATE ON FANNO CREEK TRAIL

Community Development Director Jim Hendryx introduced this agenda item. Also presenting information to the Council was Associate Planner Duane Roberts and Bob Bothman who is Chair of the Fanno Creek Trail Working Group.

Mr. Bothman reviewed a PowerPoint presentation, a copy of which is on file in the City Recorder's office. This presentation illustrated the Fanno Greek Greenway Trail, which is an important in the regional trails and greenways network. After Mr. Bothman's comments, Mr. Roberts presented a PowerPoint presentation, which is on file in the City Recorder's office.

9. REVIEW REPORT ON MAINTENANCE OF MERESTONE POND (SW 121ST AVENUE)

Project Engineer Greg Berry presented the staff report, which is on file in the City Recorder's office.

Mr. Berry reviewed the current maintenance program for Merestone Pond. The beaver dam has reached a stable level and is about 1-1/2 foot higher than what been agreed to by property owners; however, this appears to be acceptable to the

owners. The neighbors have been helping on an informal basis, although Public Works has not requested assistance from a neighborhood volunteer group because of safety concerns. It was noted that this dam blocks fish from traveling in the stream, but this is a "natural dam."

10. CONSIDER AMENDMENT TO CHAPTER 11.08 OF THE TIGARD MUNICIPAL CODE (TMC) PERTAINING TO BURGLARY AND ROBBERY ALARM SYSTEMS

Police Chief Ron Goodpaster presented the staff report, which is on file in the City Recorder's office. Under consideration were several code amendments in TMC 11.08.

Motion by Councilor Dirksen, seconded by Councilor Scheckla, to adopt Ordinance No. 01-21.

ORDINANCE NO. 01-21 – AN ORDINANCE AMENDING SECTION 11.08 OF THE TIGARD MUNICIPAL CODE – BURGLARY AND ROBBERY ALARM SYSTEMS

The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

11. CONSIDER ELIMINATION OF CHAPTER 2.06 OF THE TIGARD MUNICIPAL CODE PERTAINING TO RESIDENCY REQUIREMENTS

City Manager Monahan presented the staff report, which is on file in the City Recorder's office. Councilor Scheckla recalled that in 1978 he had served on the City Council and, at that time, the majority of Council established the residency requirements for department heads. He noted that he had not been in agreement with the proposal that was adopted in 1978.

Consensus of City Council was that this language was antiquated.

Motion by Councilor Scheckla, seconded by Councilor Dirksen, to adopt Ordinance No. 01-22.

ORDINANCE NO. 01-22 – AN ORDINANCE DELETING CHAPTER 2.06, RESIDENCY REQUIREMENTS, OF THE TIGARD MUNICIPAL CODE.

The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

12. COUNCIL LIAISON REPORTS: None.

13. NON AGENDA ITEMS:

- League of Oregon Cities-City/County Insurance Services Safety Award. A page entitled "Comments for the Mayor" is on file in the City Recorder's office describing the award bestowed upon the City of Tigard. The City of Tigard was notified of this Gold Medal Safety when awarded at the 76th Annual League of Oregon Cities conference held in Eugene earlier this month. Award winners are determined by the lowest injury frequency rate. This rate is computed by the number of lost-time injuries per 200,000 person hours worked. Tigard's injury-frequency rate was 1.10 for the fiscal year 2000-2001. Over the previous two years, the City received the Silver Award. Congratulations are in order for each and every City employee and their outstanding achievement in maintaining a safe work place.

- RESOLUTION NO. 01-69 – A RESOLUTION RECOGNIZING ROBERT (BOB) J. WHEELER FOR THIRTY YEARS OF SERVICE TO THE CITY OF TIGARD.

  Motion by Councilor Scheckla, seconded by Councilor Patton, to adopt Resolution No. 01-69.

  The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

- RESOLUTION NO. 01-70 -- A RESOLUTION RECOGNIZING ROBERT (BOB) L. THOMPSON FOR THIRTY YEARS OF SERVICE TO THE CITY OF TIGARD.

  Motion by Councilor Patton, seconded by Councilor Dirksen, to adopt Resolution No. 01-70.

  The motion was approved by a unanimous vote of City Council present:

Mayor Griffith:	Yes
Councilor Dirksen:	Yes
Councilor Moore:	Yes
Councilor Patton:	Yes
Councilor Scheckla	Yes

- Mayor Griffith announced that there would be a Skateboard Park Task Force meeting on Thursday, 7 p.m.

Mayor announced that the Council at this time would be moving its meeting to the Red Rock Creek Conference Room to discuss the remaining Study Session Items and then the Council would be convening into an Executive Session.

The Council meeting recessed at 9:10 p.m.
Study Session reconvened at 9:15 p.m.

STUDY SESSION (Continued)

- Council received two memorandums from Clean Water Services dated November 9, 2001, regarding regional water supply issues. These letters are on file in the City Recorder's office. City Manager Monahan noted that Washington County Chair Tom Brian and County Commissioner Roy Rogers have expressed interest in providing water for eastern Washington County through assistance from Clean Water Services. Mr. Monahan noted that the City of Tigard has a good relationship with the Joint Water Commission and would be cautious in doing anything that might harm the relationship. There is a meeting that will be held on November 27 that has been called by Chair Brian to discuss this matter. Mayor Griffith noted that he would be interested in reviewing this proposal only if it could be shown that they (the County and Clean Water Services) would move forward immediately. Mayor Griffith advised that he would not want any additional studies to be requested.

Councilor Patton referred to an elected officials meeting that she and Mayor Griffith would attend on November 16, where this matter would be discussed. The County has suggested that Scoggins dam could be raised more than what is currently planned plus they would want to coordinate federal funding.

- Council briefly discussed the upcoming National League of Cities conference. Discussion topics included transportation once the conference attendees arrived in Atlanta, some of the conference workshops to be held at the conference, and transportation to the airport.

- City Manager Monahan noted that Attorney Ed Sullivan forwarded an e-mail communication requesting two waivers of conflict of interest. A copy of the request is on file in the City Recorder's office. Mr. Monahan noted that Community Development Director Jim Hendryx said he had no concerns with this request. After discussion, Council member agreed the waiver would be granted for Mr. Sullivan to assist these clients through the administrative process. However, the waiver would not be granted if these issues were appealed.

- Metro Listening Posts – Information was distributed to the City Council, which is on file with the City Recorder. Listening Posts for the Metro Green Ribbon Committee were scheduled for November 13 and 20 – both these dates are Tuesday nights. City Manager Monahan responded to Metro and informed them that these dates are at the same time the Tigard City Council meets. He requested that Metro make an effort to avoid such conflicts in the future with meetings that would be of interest to the City of Tigard.

14. EXECUTIVE SESSION: The Tigard City Council went into Executive Session at 9:40 p.m. under ORS 192.660 (1) (e) to discuss a real property transaction.

15. ADJOURNMENT: 9:55 p.m.

_____
Catherine Wheatley, City Recorder

Attest:

_____
Mayor, City of Tigard

Date: _____

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AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

MEMORANDUM
CITY OF TIGARD, OREGON

TO: City Council
FROM: Greer Gaston
DATE: January 2, 2002
SUBJECT: COUNCIL CALENDAR, January 2002 - March 2002

Regularly scheduled Council meetings are marked with an asterisk (*). If generally OK, we can proceed and make specific adjustments in the Monthly Council Calendars.

January

1	Tues	New Year's Day – City Offices Closed
* 8	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting
14	Mon	Council Goal Setting Meeting – 1:00 p.m.
		Tigard Water Building
* 15	Tues	Council Workshop Meeting - 6:30 p.m.
21	Mon	Martin Luther King, Jr. Day – City Offices Closed
* 22	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting

February

* 12	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting
18	Mon	Presidents Day - City Offices Closed
* 19	Tues	Council Workshop Meeting - 6:30 p.m.
* 26	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting

March

* 12	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting
* 19	Tues	Council Workshop Meeting - 6:30 p.m.
* 26	Tues	Council Meeting - 6:30 p.m.
		Study Meeting - Business Meeting

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Tigard City Council
Tentative Agenda

1/14/02 - Goal Setting	1/15/02 - Workshop	1/22/02 - Business TV Ed -Greeter
	Due: 12/31/01 @ Noon	Due: 1/8/02 @ Noon
	Workshop Topics	**Study Session**
Goal Setting at the Water Building - 1:00	Joint Meeting with IWB on Regional Drinking	Update on Randall Grant Program - Liz - 10 min
	Water Proposal - Ed - 40 min	City Attorney Review
	(PowerPoint Presentation and possibly a	**Consent Agenda**
	consultant.)	Council Goal Update (SI)
	Transfer of Juvenile Cases to Municipal Court -	Application for Trail Grant - **RES** - Duane
	Craig/Nadine/Judge O'Brien - 15 min	Approve Internet Policy - Bill
	Skate Board Park Update - Dan Plaza & Rich	Appt. Jeffrey Lawton to Library Board - Susan K
	Carlson - **BLUE SHEET**	Draft 2002 Council Goals - Bill
	Discuss Bull Mountain Annexation Open House	Budget Amendment - New Position at the
	Meeting - Julia - 20 min.	Tigard Library - **RES** -Craig
	Urban Growth Boundary Potential Expansion -	**Business Meeting**
	Update - Barbara S 20 min.	1. Recognize Service on Planning Commission -
	Washington Square Regional Center Plan	Susan - 5 min
	Implementation Strategy Update - Barbara S.	2. Direction on Tigard Involvement in Portland
	35 min.	Regional Drinking Water Proposal - Ed - 10 min
	Update - Washington County Long-Range	3a. Citywide Fees & Charges Schedule - **RES** -
	Transportation Plan by Gretchen Buehner -	Michelle/Craig - 10 min
	Jim H - **BLUE SHEET**	3b. TMC Update - Remove References to Fees &
		Charges & Code Language Fees & Charges
		Set by Res - **ORD** - Michelle/Craig - 10 min
		3c. TMC Update - City Manager Set Interim Fees -
		ORD - Michelle/Craig - 10 min
		4. TMC Update - Abandoned, Found, Seized and
		Stolen Property - **ORD** - Ron - 10 min
		5. Thornwood Annexation - **PHQJ** - **ORD** -
		Morgan -15 min
		6. WA Square Regional Center Implementation &
		Code & Comprehensive Plan Amendments -
		PH - **RES** - **ORD** - Julia - 1 hr
		7. Preliminary Evaluation of Wall St LID - Gus -
	SI = standing item	15 min
	I:/adm/greer/tentatv ag/tentative.xls	8. Durham Quarry IGA - Jim - **BLUE SHEET**
		20 min.
		TMC Update - Police Dept 2.30 - **ORD** - Ron
		- 10 min

Tigard City Council
Tentative Agenda

2/12/02 - Business TV -Greeter	2/19/02 - Workshop	2/26/02 - Business TV -Greeter
Due: 1/29/02 @ Noon	**Due: 2/5/02 @ Noon**	**Due: 2/12/02 @ Noon**
Study Session	**Workshop Topics**	**Study Session**
*** Bill Monahan Not Present ***	*** Bill Monahan Not Present ***	
	Jt Mtg w Planning Comm (SI) - **BLUE SHEET**	
	Proposed Title 3 Code Amendment - Duane -	
	25 min	
	Role of Board and Committee Members and	
Consent Agenda	Volunteers & City Support - Susan K/Liz 20 min.	**Consent Agenda**
Business Meeting		**Business Meeting**
VA - Nathan Leamy		
TMC Update - Public Assemblies (Balloon		
Festival) - **ORD & RES** - Ron - 10 min		
69th LID Closeout - Gus - **BLUE SHEET**		
Library Construction Committee Update		
TMC Chapter 2.20 Amendment - **ORD**		
Craig/Nadine 10 min		
TMC Update - Chapter 2.24 - Nadine - 5 min.		
TMC Update - Chapter 2.26 - Nadine - 5 min.		
Wall St LID - Approval of Preliminary		
Engineering Study - Gus - 5 min		
Update on New Web Site - Paul - **BLUE SHEET**		
Religious Institute Parking Amendment - **PH -**		
ORD -Brad - 15 min		
	SI = standing item	
	I:/adm/greer/tentatv ag/tentative.xls	

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Revision to Resolution No. 00-08, City Wide Personnel Policies, Article 45, Electronic Communication

PREPARED BY: Sandy Zodrow DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Should the Council adopt the revisions to Resolution No. 00-08, City Wide Personnel Policies, Article 45, Electronic Communication?

STAFF RECOMMENDATION

Approve revision as presented, and adopt change to Resolution

INFORMATION SUMMARY

Three years ago, the Tigard City Council considered the Government Standards and Practices Commission Advisory Opinion 98A-1003 - Technology that created guidelines that allowed our employees to utilize government-owned computers and our Internet access for personal use. Following Council action, the guidelines were incorporated into the City's Personnel Policies. At the time, the City Manager committed to monitor the application of these guidelines and consider any changes to the policies as needed. The City Manager has consulted with the City Attorney and researched these issues over that time. As this area of workplace policy has evolved, several issues has been brought to the attention of employers: a) inappropriate email use can leave employers vulnerable to lawsuits, b) email can fall into the EEOC's definition of sexual harassment, c) accessing an internet site could lead to "slamming" where hyperlink sites can be connected to an employee's computer without the employee's knowledge, including potentially inappropriate sites, d) the use of City equipment and internet for personal use is either difficult to monitor or difficult to enforce, e) security for the network is at risk when the internet connection could lead to inappropriate access to City records from outside the organization, and f) email is an invitation to dangerous virus attacks. Based on a comprehensive review of this matter, the City Manager recommends that the City Council eliminate the present guidelines that allow employees to utilize the Internet for personal use and incorporate current business practices on this workplace policy. The attached Exhibit A more specifically incorporates the suggested revisions.

OTHER ALTERNATIVES CONSIDERED

Other options have been considered by Executive Staff and were not pursued

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Not applicable

ATTACHMENT LIST

Exhibit A, Revisions to Article 45, Electronic Communications, City Wide Personnel Policies

FISCAL NOTES

Not applicable

CITY OF TIGARD, OREGON

RESOLUTION NO. 02-_____

A RESOLUTION TO REVISE RESOLUTION NO. 00-08, CITY WIDE PERSONNEL POLICIES, INCORPORATING CHANGES TO ARTICLE 45, ELECTRONIC COMMUNICATIONS

WHEREAS, the City of Tigard has determined that Article 45, Electronic Communications, of the City Wide Personnel Policies, is in need of updating to address organizational needs and current business practices,

WHEREAS, a complete review and update to this article has now been completed,

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The proposed revisions to Article 45, Electronic Communications, as referenced in the attached Exhibit A are hereby adopted.

SECTION 2: The resolution is effective immediately upon passage.

PASSED: This _____ day of _____, 2002.

_____
Mayor - City of Tigard

ATTEST:

_____
City Recorder - City of Tigard

EXHIBIT A
Computer Use, Electronic Mail and Internet Policy for the City of Tigard

This policy applies to all City of Tigard employees and their use of City computers, the electronic mail (e-mail) system and the Internet.

It is the City's goal to enhance both external and internal communication through the use of various electronic communication tools. All electronic communication tools are the property of the City of Tigard. Employees should have no expectation of privacy in connection with the transmission, receipt, or storage of information in these electronic devices. Any individuals using this system are subject to monitoring and all individuals using the system without authority or in excess of their authority are subject to having all their activities on this system monitored, recorded and examined by an authorized person, including law enforcement, as system personnel deem appropriate. Any material so recorded may be disclosed as appropriate.

Information Sharing
Employees are not allowed to use a code, access a file, or retrieve any stored information, other than where authorized, unless there has been prior clearance by an authorized supervisor. City property or information that is confidential and/or proprietary information cannot be shared with individuals outside of the City without prior clearance from a department director. Any employee who leaves employment with the City is prohibited from taking or copying any City property or information unless specifically authorized by their department director.

Personal Use
In general, employees may not use computers owned by the City for personal purposes. The City of Tigard's computer system is for authorized users only. There are some circumstances where the City believes the use of computers for personal purposes does not violate the Oregon Government Standards and Practices Commission guidelines (see Exhibit A.) For example, an allowable use would be the preparation of application materials for a different position within the City or term papers for a City-sponsored class.

The personal use of City computers, <u>with the exception of e-mail and the Internet</u>, is permitted:

- during an employee's lunch period,
- one hour before their normal work schedule begins,
- one hour after their normal work schedule ends, and
- the time between the end of the employee's "work shift" and the beginning of an evening meeting that the City requires the employee to attend.

Personal use of the e-mail system and the Internet is not allowed at any time.

No personal use of City computers is allowed on an employee's day off unless the use is related to an educational purpose that is consistent with the City's policies and has been approved by the employee's supervisor.

Personal use of the computer system may not interfere with the employee's work, another employee's work or have an undue impact on the network. Playing games on the City's computers is not allowed. Sending large attachments (greater than two megabytes) to multiple people, distributing hoaxes, and spamming are examples of e-mail usage that could affect employee time or system capacity

Internet Access
The City has equipped their computers with access to the Internet in order to have access to information and to provide information to the public. Personal use of the Internet is not allowed.

City equipment may not be used at any time to access inappropriate sites or to transmit or receive inappropriate information. Pornography, hate groups, and off shore gambling are examples of inappropriate sites and accessing these sites is a misuse of City property.

The City recognizes that occasionally, while in pursuit of valid City business, an employee may inadvertently follow an Internet link that leads to an inappropriate web page. If this occurs, it is not necessary for the employee to respond to the owner of the page, but the employee must notify his or her supervisor of what happened. Copies of e-mail and accessed web pages remain in the system for a period of time and the City may retrieve e-mail and web site histories. It is for the employee's own protection that any anomalies are documented.

E-mail
E-mail is a communication tool provided to City employees to assist them in the performance of their job duties. Personal use of the City's e-mail system is not allowed.

The City's e-mail system may not be used:
- to access an employee's personal internet e-mail account;
- to forward another's e-mail without the originator's permission;
- to send e-mail anonymously or under someone else's name;
- to support charitable, religious, or political activities or causes; and
- to support other activities that are not related to the direct conduct of City business.

Users understand that the City may use automated software to monitor material created, stored, sent, or received on its computer network.

Employee Responsibility
If an employee receives an inappropriate e-mail, he or she must immediately respond to the sender with a copy of the City's warning message, found in I:\citywide\EMAIL-WARNING.doc (Exhibit B.) **A copy of the response, including the original sender's**

name and e-mail address, must be sent to the employee's supervisor. This is to show the supervisor the employee made a good faith effort to dissuade the sender from sending inappropriate material. It also provides the employee protection if inappropriate materials are found in the employee's mailbox or hard drive.

If an employee receives a personal e-mail, he or she must immediately respond to the sender with a message notifying the sender the employee may not receive personal e-mail at the City. An example is available at I:\citywide\personale-mail.doc (Exhibit C.)

Laws and Licenses Compliance
Users are required to comply with all software licenses, copyright laws, Oregon Government Standards and Practices Commission's guidelines, City policies, and state and federal laws when using the City's computers, sending or receiving e-mail or accessing or downloading information from the Internet.

System Security
All employees have a responsibility to take reasonable precautions to protect the City's computer system. Reasonable precautions include, but are not limited to, updating anti-virus software when requested by Network Services, not allowing unauthorized access to the computer system, and safeguarding the employee's password.

If an employee becomes aware of a virus or the threat of a virus, the employee should immediately contact Network Services with the information. Network Services will evaluate the risk and, if warranted, notify all employees of the precautions that need to be taken.

Public Record
Under Oregon's public records law, most electronic mail messages are clearly public records. The definition of public records in ORS 192.005(5) "includes, but is not limited to, a document, book, paper, photograph, file, sound recording, or machine readable electronic record, regardless of physical form or characteristics, made, received, filed or recorded in pursuance of law or in connection with the transaction of public business, whether or not confidential or restricted in use."

Although some messages may not fall under the definition of public record, it is safest to assume all messages created could be considered public record. Since most messages are public records, the only privacy an employee can expect is that afforded through disclosure exemptions. The privacy afforded government employees using government e-mail systems is minimal and an employee should have no expectation of privacy.

Public access and exemption from disclosure
E-mail is considered correspondence and like other forms of public records it must be made available to any member of the public upon request. Unless an e-mail message falls within one of the specific exemptions described in the public records statute, the e-mail record must be produced upon request. A person need not have a "legitimate" need for public records to be entitled to inspect them.

Please check with your supervisor, or the City Records Section, if you have a question on whether an electronic mail message should be provided to the public.

Retention and Disposition

The retention of records stored in electronic records systems, including e-mail systems, is governed by the City's retention schedule. If you have a question about the retention of a message, please contact the City Records Section.

An e-mail mailbox should not be used for storage. If an e-mail has value it should be printed and put into the appropriate file. It is the responsibility of the holder of the official record to make sure the file is updated. For example:

- An updated record's policy is e-mailed to all employees. It is the responsibility of the person sending the e-mail to keep the record copy.

- John Citizen calls and leaves a detailed message regarding a pending file; the receptionist forwards the message through the e-mail system. It is the responsibility of the person receiving the message to add the message to the file.

E-mail related to a current project or issue may be retained on the system as a reference tool. Once the project is completed or the issue resolved the employee should verify all relevant e-mail is in the file and then delete the e-mail from their e-mail box.

E-mail is a form of correspondence and must be kept in accordance with state retention requirements. The retention schedule for electronic mail records incorporates several correspondence record series. Examples are:

Record Series Correspondence	**Retention Period**	**Action to take**
Ephemeral (junk mail)	Retain as needed	Read and delete
General	1 year	Read, print and delete
Financial	3 years	Read, print and delete
Policy and Historical	Permanent	Read, print and delete

Program	Retain for the same period as the program or functional records series to which it relates	Read, print and delete

Policy Compliance
Employees who violate the *Computer Use, Electronic Mail and Internet Policy* may have e-mail access and Internet privileges suspended as well as be subject to disciplinary action, up to and including termination of employment.

Exhibit B - E-mail warning

"The City of Tigard considers your enclosed email as offensive and inappropriate use of city equipment. Please do not send me this type of material again. Should I receive similar material in the future I will forward it to Tigard City Administration who may contact and file a complaint with your Internet Service Provider and/or your Postmaster."

Exhibit C - Personal use of e-mail

"The City of Tigard does not permit personal use of their e-mail system. Please direct all your correspondence to my home e-mail address. Thank you."

Computer Use, Electronic Mail System and Internet Policy
Employee Acknowledgment Form

I have read the *Computer Use, Electronic Mail and Internet Policy for the City of Tigard.* I understand that the electronic mail system and all information transmitted by, received from, or stored in the City's computer system is the property of the **City of Tigard**. I also understand the e-mail system and Internet access is provided for job related purposes. I have no expectation of privacy in connection with the transmission, receipt, or storage of information in the computer system. I understand that if I use the system for personal or improper reasons I bear any responsibility that may arise from that usage. I understand that violation of the *Computer Use, Electronic Mail and Internet Policy* may result in my e-mail access and Internet privileges being suspended as well as being subject to disciplinary action, up to and including termination of employment.

I acknowledge and consent to **City of Tigard** authorized personnel monitoring my use of the e-mail system and the Internet at their discretion. Such monitoring may include printing and reading all e-mail entering, leaving, or stored in the system.

I agree not to compromise the privacy of other network users by using a code, accessing a file, or retrieving any stored communication unless authorized. I further agree to comply with all software licensing agreements, copyright laws and City policies in my use of the City's computers.

I understand electronic mail may be a public record, and as such, retention of electronic mail is regulated by the City's retention schedule. When an e-mail message has administrative, historical, or informational value I will print it and put into the appropriate file. I understand destruction of electronic messages must be done in accordance with the City's retention schedule.

_____
Employee Name (please print)

_____ _____
Employee's Signature Date

_____ _____
Signature of person conducting training Date

Acknowledgment Form for Employees
Without E-mail or Internet Access

I certify that at this time I do not have access to e-mail or the Internet through the City of Tigard's computer system. I understand if at any time in the future I am given access to the City's e-mail system or the Internet, I am required to read and acknowledge the *Computer Use, Electronic Mail and Internet Policy for the City of Tigard.*

____
Employee Name (please print)

____ _______________
Employee's Signature Date

____ _______________
Signature of person conducting training Date

//

No Computer Access or Network Log-on Identification
Employee Acknowledgment Form

I certify that at this time I do not have computer access or a network logon identification for the City of Tigard's computer system. I understand if at any time in the future the City gives me computer access or a network logon identification, I am required to read and acknowledge the *Computer Use, Electronic Mail and Internet Policy for the City of Tigard.*

____
Employee Name (please print)

____ _______________
Employee's Signature Date

____ _______________

Signature of person conducting training Date

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE A resolution approving the City of Tigard updated Investment Policy.

PREPARED BY: Roger Dawes, Craig Prosser DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Should the Council approve of the City's updated Investment Policy?

STAFF RECOMMENDATION

Approve the updated Investment Policy.

INFORMATION SUMMARY

In August and September of 2001, staff developed updates to the investment policy to allow for purchase of investments with maturities of up to 36 months. This is a change from the policy of 18 month maturities currently being used. The additional time will allow investment officer to earn a better interest rate and thus earn more interest income on the City's investment.

After the updates were developed, they were sent to the Oregon Short Term Fund Board for their review. The review is not an approval process. The Board reviews and comments on investment policies submitted to them. By submitting the policy to the Board, the City has fulfilled the requirements in ORS 294.135 regarding investment maturity dates. By approval of this resolution, the Council will formally adopt the updated investment policy.

OTHER ALTERNATIVES CONSIDERED

Do not approve updated investment policy and continue with current policy that limits maturities on investments to 18 months.

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

N/A

ATTACHMENT LIST

Resolution
Exhibit A – City of Tigard Investment Policy

FISCAL NOTES

If approved, investment officer will have the opportunity to earn the City additional interest income on the City’s investments.

CITY OF TIGARD, OREGON

RESOLUTION NO. 02-_____

A RESOLUTION - APPROVING THE CITY'S UPDATED INVESTMENT POLICY

WHEREAS, ORS 294.035 requires investment officers to obtain a written order from the governing body of a municipality before investing surplus funds, and,

WHEREAS, the current investment policy was adopted by resolution 89-59 on July 24, 1989 and was amended by resolution 94-53 dated November 29, 1994 and resolution 98-71 dated December 15, 1998, and,

WHEREAS, the Finance Director and investment officer desire to update the investment policy to allow for purchase of investments with maturities ranging from 18 months up to 36 months so as to earn the City higher interest rates and therefore additional investment income, and

WHEREAS, the City Council desires to update the investment policy upon the recommendation of the Finance Director.

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The investment policy is amended as indicated on the attached Exhibit A.

EFFECTIVE DATE: This resolution takes effect upon passage.

PASSED: This _____ day of _____, 2002.

_____
Mayor - City of Tigard

ATTEST:

_____
City Recorder - City of Tigard

"EXHIBIT A"

CITY OF TIGARD
INVESTMENT POLICY

The following Investment Policies are intended to meet the requirements of ORS 294.035 and to provide the framework within which City of Tigard funds may be invested.

Authority

The Finance Director shall serve as the Investment officer of the City. The investment officer is responsible to ensure that funds are invested so as to make necessary cash available to meet current obligations and to invest excess cash in accordance with ORS 294.035 through ORS 294.047 and these Investment Policies.

The Finance Director may assign the delegation of authority to persons responsible for investment transaction. This person would then act as Investment Officer with prior approval of the City Manager.

Scope

These investment policies apply to all excess cash related to all activities and funds under the direction of the Tigard City Council including water funds on behalf of Durham, King City, and Tigard Water District. Cash accumulations related to bond proceeds or short-term borrowing is included unless more restrictive state or federal regulations are applicable.

Excess cash shall be defined as all liquid assets not necessary to meet current obligations.

Deferred Compensation

Deferred compensation funds are placed with a third party for investment and are therefore excluded from the restrictions set forth in these guidelines.

Objectives

The objectives of these policies are to provide for the preservation of City assets, the availability of such assets to meet obligations as they come due, and to provide for a reasonable rate of return on those assets, in that order.

Prudent Investor

Investments shall be made under the prudent investors rule, which states, "Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation but for investment, considering the probable safety of their capital as well as the probable income to be derived."

Internal Controls

The investment officer shall maintain a system of written internal controls, which will be reviewed annually by the independent auditor.

Cash Flow Analysis

The investment officer shall maintain a historical cash flow record and a cash flow projection, which extends twelve months into the future. The projection shall be reviewed and updated on a regular basis. No fixed maturity securities shall be purchased unless the cash flow projection indicates that the funds invested will not be required until the maturity date of the investment.

Bond Proceeds

Surplus funds resulting from debt issuance shall be considered as a separate portfolio and shall not be restricted by the maturity and instrument diversification section of these policies. Such funds may be invested for periods exceeding 18 months and up to 60 months. Such maturities shall coincide with the projected cash flow needs resulting from the projected construction schedule.

Diversification

The investment officer will diversify the general portfolio to avoid unreasonable risks within the following parameters:

- Maturity Diversification

  Investment maturities shall be scheduled to coincide with projected cash flow needs. Thirty percent of the portfolio will mature in less than 90 days. No investments will be made for a period to exceed 18 months unless:

  This investment policy has been submitted to the OSTF Board for comment prior to being approved by Council and complies with the requirements of ORS 294.135. In this case, the maximum maturity shall be defined in policy.

  The funds are being accumulated for a specific purpose, including future construction projects, and upon approval of the Council, the maximum maturity date matches the anticipated use of the funds (ORS 294.135(1)(b).

  If this investment policy has been submitted for review by the OSTF Board as specified above and in accordance with ORS 294.135(1)(a), debt service reserves may be invested to mature (not longer than five years or appropriate date). Otherwise debt service reserves shall not be invested to a maturity date exceeding one year as specified under ORS 294.135(3).

  The Investment Officer may make investments having maturity longer than 18 months but not more than 36 months, with the exception of Bond Proceeds. The City's investment portfolio shall not contain more than 20% (of the total dollar value) of its investments with maturities between 18 months and 36 months.

- Instrument Diversification

Certificates of Deposit	25% maximum
Corporate Indebtedness	35% maximum
Bankers Acceptance	50% maximum
Treasury/Agency Securities	90 % maximum
Local Government Investment Pool	100% maximum
Demand Deposits	10% maximum
Lawfully issued Debt Obligations of the States of Oregon, Washington, Idaho and California and political subdivisions of those states.	25% maximum

- Institution Diversification

  Bank liabilities with any one qualified financial institution shall not exceed 20 percent of the portfolio. Bank liabilities of any one qualified financial institution shall not exceed one percent of the institution's total assets. Investment in Corporate Indebtedness shall not exceed 5 percent of the portfolio in any one Oregon corporate entity meeting the rating requirements of P-2/A-2 or better, or 5 percent of the portfolio in any one corporate entity outside the State of Oregon (ORS 294.035 section C).

For purposes of these guidelines, the state local government investment pool (LGIP) shall be considered to have a one-day liquidity.

Selection of Investment Instruments

Investments shall be made by the investment officer through the exercise of his/her judgment after requesting quotes from financial institutions. Selections will be made so as to provide the highest rate of return within the parameters of these policies.

Qualified Institutions

The investment officer shall maintain a list of all authorized institutions, which are approved for investment purposes. The investment officer will request, analyze, and keep on file, periodic financial statements and related information to satisfy himself/herself as to the creditworthiness of each institution on the approved list.

Reporting

The investment officer shall prepare an investment activity report at the end of each month for review by the City Manager.

Amendments

These investment policies may be amended at the request of the investment officer, the City Manager, or members of City Council. Such amendments shall be approved by the City Council in the same manner as the investment policies.

Authorized Investment Instruments

The investment officer shall invest the money of the City only in qualifying investments according to guidelines in ORS 294.035. These investments include:

- Demand deposits with approved institutions.
- Deposits in the Oregon Local Government Investment Pool.
- Certificates of Deposit with Oregon banks.
- Banker's acceptances.
- Qualifying corporate indebtedness not to exceed 5% of the portfolio on any one corporation.
- Lawfully issued debt obligations of the United States and obligation guaranteed by the United States, the agencies of the United States or enterprises sponsored by the United States government, not to exceed 40% of the portfolio on any one government sponsored enterprise.
- Lawfully issued debt obligations of the States of Oregon, Washington, Idaho and California and political subdivisions of those states.

Safekeeping

A third-party custodian as evidenced by safekeeping receipts will hold securities (excluding bank deposits and CDs).

Other Policy Considerations

Any investment currently held that does not meet the guidelines of this policy shall be exempted from the requirements of this policy. At maturity or liquidation, such monies shall be reinvested only as provided by this policy.

AGENDA ITEM # _____
FOR AGENDA OF 1/8/02

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE 2002 Greenspaces Program-Conservation and Restoration Program

PREPARED BY: Dan Plaza/Matt Stine DEPT HEAD OK ED CITY MGR OK

ISSUE BEFORE THE COUNCIL

Seek Council approval to apply for a grant entitled: 2002 Greenspaces Program-Conservation and Restoration Program.

STAFF RECOMMENDATION

Recommend City Council approve the grant application

INFORMATION SUMMARY

The primary intent of the existing Fanno Creek Park Enhancement Plan is to restore the area by removing non-native plants, and replanting and protecting native plants. The restoration of the area will be accomplished by adding to the native plantings that currently are integral parts of Fanno Creek Park. The first actions will be the removal and control of the non-native vegetation. Essentially, the grant includes preparing various sites for the planting of native trees, shrubs, grasses, and wetland plants. The City will be partnering extensively with: Northwest Service Academy-Americorps, Oregon Department of Corrections, Trout Unlimited, Friends of Trees, Tualatin Riverkeepers, Fans of Fanno Creek, Northwest Steelheaders, local service clubs and community volunteers, to remove non-native plants and to replant and protect native plants. The benefit of the project is to restore a very important segment of Fanno Creek in accordance with City and Regional commitments to preserve and protect open space and greenway areas.

OTHER ALTERNATIVES CONSIDERED

- One alternative that has been considered is that the City fund the entire Fanno Creek Park Enhancement Plan.
- Another alternative would be for the City to take a hands-off approach and leave the park as it is.

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

City Council Goal #4 states, "Consider implementing the City Park Master Plan"

"Tigard Beyond Tomorrow"

- The City educates and supports citizen efforts to understand the importance of floodplains and how the areas are managed and protected
- Open Space and Greenway areas are preserved and protected
- Adopt educational and presentation programs for wetlands and open spaces

ATTACHMENT LIST

- Grant Application
- Fanno Creek Park Enhancement Plan
- Resolution approving submittal of application

FISCAL NOTES

Grant request	$39,999
Matching amount (City funds)	$68,008
Amount from Tree Mitigation Fund	$28, 776
Amount from City Personnel	$37,477 (in-kind)
Amount from Volunteer Labor	$ 1,755 (in-kind)

All funds are presently appropriated in the FY '01-'02 budget. Future funding for this project is proposed in next years FY '02-'03 budget.

2002
GREENSPACES PROGRAM

a partnership between the U.S. Fish and Wildlife Service
and Metro Regional Parks and Greenspaces

Conservation and Restoration Program

(formerly the Habitat Restoration Grant Program)

THIS PROGRAM PROVIDES FUNDING FOR PROJECTS THAT:
CONSERVE, RESTORE AND ENHANCE
FISH AND WILDLIFE AND THEIR HABITATS
IN THE PORTLAND/VANCOUVER AREA

Pre-applications due: January 10, 2002 by 5:00 p.m.
Final applications due: February 27, 2002 by 5:00 p.m.
Pre- and final applications must be physically received by the deadlines.

Hand deliver or mail one original and 8 double-sided copies to:
Attention: Jennifer Thompson
U.S. Fish and Wildlife Service
Oregon Fish and Wildlife Office
2600 SE 98th Avenue, Ste. 100
Portland, Oregon 97266

Questions?
e-mail: Jennifer_Thompson@fws.gov
Phone #: (503) 231-6179
Greenspaces Program web sites:
http://oregonfwo.fws.gov/greenspaces/gs-program.htm
http://www.metro-region.org/parks/parkgrants.html

CONSERVATION AND RESTORATION PRE-APPLICATION

PRE-APPLICATION

Pre-applications provide an opportunity for applicants to obtain early feedback from reviewers that can be used in developing final applications. Pre-applications are required for funding consideration in the 2002 Conservation and Restoration Program cycle. They must be physically received by 5:00 p.m. on January 10, 2002. Please send or deliver one original and 8 double-sided copies of each pre-application to: Jennifer Thompson, U.S. Fish and Wildlife Service, 2600 SE 98th Avenue, Ste. 100, Portland, OR 97266. Questions? Call (503) 231-6179 or e-mail: Jennifer_Thompson@fws.gov.

PART 1: BACKGROUND INFORMATION

1.	Project/Program name: Fanno Creek Park Enhancement Plan		
2.	Applicant organization: City of Tigard, Oregon		
	Type of organization: City Government		
	Address: 13125 SW Hall Boulevard, Tigard, OR 97223		
3.	Applicant contact: Matt Stine, City Forester		
	Phone #:503-639-4171 Extension 423	Fax #: 503-684-8840	E-mail address: mstine@ci.tigard.or.us
4.	Funding request: $39,999	Projected match: $68,008	Total estimated project cost: $92,231
5.	If applicable, provide directions to the project area(s) from I-5 or I-205 (attach map): I-5 South from Portland to the 99W exit. Follow 99W to Hall Boulevard. Take a left onto Hall Blvd., cross railroad tracks, go through light at Burnham and take a left into City Hall parking lot. The project limits begin behind City Hall on Hall Blvd and continue west, northwest, north to Main Street in Tigard.		

CONSERVATION AND RESTORATION PRE-APPLICATION

PART 2: ESSAY QUESTIONS

Please answer each of the following questions in a page or less.

1. Describe the project or program, including potential partners and their roles, proposed activities and implementation methods. For restoration and enhancement projects, include a description of the existing site conditions and approximate dimensions of the area to be affected.

2. Explain your goals and how the project or program is expected to benefit fish and wildlife.

3. Describe how you propose to evaluate the project or program to measure success. For restoration and enhancement projects, please include specific details about how you plan to monitor the project.

1. **Describe the project or program, including potential partners and their roles, proposed activities and implementation methods. For restoration and enhancement projects, include a description of the existing site conditions and approximate dimensions of the area to be affected.**

Fanno Creek Park is located in Tigard, Oregon. The park is approximately 26 acres and includes a portion of Fanno Creek, which extends approximately three-quarters of a mile through the park.

At several locations throughout the park the creek's banks are quite steep and covered with non-native vegetation, mostly Himalayan blackberry. In areas where the creek banks are more moderate and gentle, the ground is covered with non-native reed canary grass and Himalayan blackberry. For the most part, tree and native shrub cover is scattered and fragmented. Several attempts have been made in the past to plant native trees and shrubs but survival has been poor due, mainly, to impacts caused by nutria.

The primary focus of the Fanno Creek Park Enhancement Plan is to restore a native contiguous ecosystem. We will accomplish this goal by enhancing the mosaic of diverse natural systems that currently make up the park.

The park is divided into three areas, all of which are further divided into units. We anticipate that the enhancement plan will be complete June 30, 2007. Various monitoring requirements will, however, occur on an on-going basis for an indefinite amount of time.

In each area the first action that will occur will be the removal and control of the non-native vegetation. Essentially we are preparing various sites for the planting of native trees, shrubs, sedges and rushes. Metal wire protection devices will be installed around each tree at the time of planting to minimize the impacts of nutria and beaver. Guidelines for these protection devices were obtained from the Wetlands Conservancy. After various sites have been planted we will continue to control invasive non-native vegetation. We will also monitor the planted material for survival rates.

In order to accomplish our missions we will work with various partners throughout the term of the enhancement plan and the ensuing years. The Northwest Service Academy – Americorps will be a partner that we will work with in all phases of the enhancement plan. We will partner with the Oregon Department of Corrections to clear non-native vegetation. We will work with diverse groups of volunteers in all phases of the plan. Volunteer groups will include Trout Unlimited, Friends of Trees, Tualatin Riverkeepers, Fans of Fanno Creek, Northwest Steelheaders, local service clubs, and community volunteers. City staff, including members of the Parks Department, the Urban Forester and the Volunteer Coordinator, Susan Koepping, will be involved in all aspects of the enhancement project as well. City staff will assist with organizing volunteers, non-native vegetation removal, planting native plants, and monitoring. We also will consult with a wetland specialist who will guide us in the restoration of any wetland areas.

2. **Explain your goals and how the project or program is expected to benefit fish and wildlife.**

The Fanno Creek Park Enhancement Plan has three goals that will be followed to meet the objectives of the plan. The goals are:

- Remove non-native plant material (i.e. Himalayan blackberry and reed canary grass) to a point where it no longer threatens to create or maintain a dominant monoculture.
- Install appropriate native plant material (trees, shrubs, grass, etc.) to restore and enhance existing ecosystem conditions, create screening and minimize city maintenance requirements. We will maintain and enhance a mosaic of various natural ecosystems including wetlands, open grass areas, forests, and buffer zones.
- Monitor Fanno Creek Park bi-annually with city staff and volunteers.

The Fanno Creek Park Enhancement Plan is primarily intended to serve the needs of fish and wildlife. By replacing non-native grass and shrubs with native trees and shrubs we intend to:

- Improve water quality.
  - The increased amount of shade will help to control fluctuations of water temperature and promote favorable algae growth.
  - Tree and shrub cover will intercept surface run-off, filter out pollutants and allow water to flow into the creek at lower rates thus decreasing water flow speeds.
  - Nutrients, such as nitrates, which could be harmful to the creek's biodiversity, can be stored, transformed or removed from the groundwater.
  - The banks of the creek will be reinforced thus reducing the amount of erosion and sediment introduction into the creek.
- Add organic material to the creek, slowing water flow. Leaves, branches, fallen logs, and roots can form "microenvironments" which support highly diverse forms of macroinvertebrates and other stream-dwelling organisms. Habitat, food, and cover opportunities are provided for countless aquatic organisms, insects and mammals.
- Provide corridors for numerous types of wildlife in the air, on the ground and in the water.
- Provide habitat for wildlife such as berries as a food source, future snags for nesting, or thickets for cover. Various layers in the forest canopy will be naturally created to suit the needs of diverse populations of birds and mammals.

3. **Describe how you propose to evaluate the project or program to measure success. For restoration and enhancement projects, please include specific details about how you plan to monitor the project.**

The process of evaluation for this enhancement will begin at the earliest stages when sites are being cleared of non-native vegetation. We will assess each site to determine if the goals were met to remove all of the invasive vegetation. When we have accomplished the goal of complete non-native vegetation removal we will monitor each site on a monthly basis to control the new shoots and sprouts of the undesirable vegetation. The control methods will include the use of appropriate herbicides and hand tools (machetes, loppers, hand pruners, etc.) to kill the sprouts or cut them off at the base.

When native trees and shrubs are planted we will carefully monitor the techniques that people are using to install the plants. We will keep an eye on the diameter of each planting hole and how the plants are being handled before, during, and after the planting (for example we will check to see if the roots being "massaged", if necessary, when the plants are being removed from the pots). We will perform random inspections on planting holes to check for proper planting depth, ample soil placed around the roots, air pockets and J-roots. The plants will be inspected thoroughly on a monthly basis to monitor survival. If any plants are showing signs of weakness we will investigate the cause(s) and amend the situation immediately, if possible. Signs of plant stress that we will be looking for will be:

- abnormal foliage color
- abnormal foliage loss
- presence and amount of dead twigs and/or branches
- damage to the main trunk
- diseased foliage and/or twigs and branches
- insect damage

At the time of planting we will be installing protective fencing around each tree and shrub. The protection devices will be installed using guidelines published by The Wetlands Conservancy. The fencing will be monitored at the time of planting to assess proper installation procedures. Monthly inspections will also occur to monitor the effectiveness of the barriers, any damage that may occur, and any repairs that need to be made.

Monthly monitoring will occur throughout the fist two years or first two growing seasons, whichever is longer, after the plants were planted. After this period of time monitoring of non-native plant reinfestations, plant health & survival, protective devices and required reinforcement plantings will occur, at least, once every three months. Any necessary actions to amend a problem will be dealt with immediately.

Survival rates of trees and shrubs will follow the guidelines listed below:

SIZE	# REQUIRED PER ACRE (FOR AFFORESTATION AND REFORESTATION ONLY)	APPROXIMATE SPACING (FOR AFFORESTATION AND REFORESTATION ONLY)	SURVIVABILITY REQUIREMENT AFTER THREE YEARS OR THREE GROWING SEASONS
Bare root seedlings or Whips	300	12' X 12"	75%/225
Container grown (1,2,3 gallon)	300	12' X 12'	75%/225
Container grown (5,7 gallon) or 1" caliper B&B	200	15' X 15'	85%/170
Container grown (15, 25 gallon) or 2" caliper B&B	100	20' X 20'	100%/100

Reinforcement plantings will occur on an as-need basis to maintain the standards set forth above.

PART 3: ESTIMATED BUDGET

Please complete the following table and budget narrative. Please be as specific as possible, listing budget items, quantities, hours, and other information to indicate how figures were derived. For matching contributions, list contributors and indicate if the contribution is pending or received.

1. **Budget Table**

Budget Items	Greenspaces funding request	Matching contribution				Total:
		Funds	In-kind value	contributor(s)	pending/ received	
PERSONNEL (existing staff eligible for matching contribution only)			$37,477			$37,477
VOLUNTEER LABOR (valued @ $6.50/hour)			$1,755			$1,755
PROFESSIONAL SERVICES (include service sources, rates and hours)	$10,725	$12,000				$22,725
MATERIALS & SUPPLIES (list items and quantities)	$29,274	$16,776				$46,050
RENTAL FEES (list equipment and rates)						
INDIRECT/ OVERHEAD COSTS (eligible for matching contribution only)						
OTHER (itemize)						
TOTALS:	$39,999	$28,776	$39,232	N/A		$108,007

CONSERVATION AND RESTORATION PRE-APPLICATION

2. **Budget Narrative:** Please use the space below or attach additional sheets as needed to provide an itemized list for each line in the budget, explain how figures were derived, describe personnel and/or professional service costs and expected products, and to provide any other relevant information.

SEE ATTACHED

2. **Budget Narrative:** Please use the space below or attach additional sheets as needed to provide an itemized list for each line in the budget, explain how figures were derived, describe personnel and/or professional service costs and expected products, and to provide any other relevant information.

- GREENSPACES FUNDING REQUEST

  a. Professional Services (include service sources, rates, & hours)
     - Northwest Service Academy - Americorps-
       $400/day at 14 days = $5,600
     - Wetland Consultant-
       $75/hr at 15 hours over 3 years = $1,125
     - State of Oregon Supervised Inmate Work Crews-
       $250 - $400/day at 10 days = $2,500 - $4,000
     - **TOTAL = $10,725**

  b. Materials & Supplies (list items and quantities)
     - Shrubs = 1,463
       - Avg. price for one-gallon container = $3.00
       - TOTAL = $4,389 (rounded up)
     - Sedges, Rushes & Wetland Plants = 55,300
       - Avg. price for sedges, rushes & wetland plants (Avg. size 1" plugs) = $.45 each
       - TOTAL = $24,885
     - **TOTAL = $29,274**

GRAND TOTAL FOR GREENSPACES FUNDING = $39,999

- MATCHING CONTRIBUTION

1) Funds

   a. PROFESSIONAL SERVICES
      - Northwest Service Academy – Americorps-
        $400/day at 15 days = $6,000
      - State of Oregon Supervised Inmate Work Crews-
        $250 - $400/day at 15 days = $3,750 - $6,000
      - **TOTAL = $12,000**

   b. MATERIALS & SUPPLIES
      - Trees (One-gallon (375), 1.5" caliper(244), & whips(30)) = 649
        - Avg. price for one-gallon container = $3.00
        - Avg. price for 1.5" caliper tree = $60.00
        - Avg. price for whips = $.35 each
      - **TOTAL = $15,776** (rounded up)

2) In-kind Value

a. Personnel

- Utility II Worker = $23.90/hr. X 360 hours over 3 years = $8,604
- Utility III Worker = $25.99/hr. X 360 hours over 3 years = $9,356
- Urban Forester = $25.46/hr. X 720 hours over 3 years = $18,331
- Parks Supervisor = $31.61/hr. X 20 hours over 3 years = $632
- Parks Manager = $36.91/hr. X 15 hours over 3 years = $554
- **TOTAL = $37,477** (rounded up)

b. Volunteer Labor

- 90 volunteer hours per year (30 volunteers per year X 3 hours per project) X 6 years X $6.50.hr
- **TOTAL = $1,755**

c. Materials & Supplies

- Planting tools (shovels, rakes, spades, ball carrier, etc) = 100 tools over a 3 year period.
  - Avg. cost for each tool is $10.00. Cost for planting tools over 3 year period (50 tools X $10.00 each) = $500
- Tools for planting area preparation (loppers, machetes, weed-eaters, herbicides, sprayers, etc.) = 50 tools over a 3 year period.
  - Avg. cost for each tool is $10.00. Cost for these tools over a 3 year period = $500.
- **TOTAL = $1,000.00**

GRAND TOTAL FOR TIGARD'S MATCHING CONTRIBUTION = $68,008

Fanno Creek Park Enhancement Plan

FANNO CREEK PARK ENHANCEMENT PLAN

Fanno Creek Park is located in the heart of downtown Tigard, Oregon. It comprises approximately 26 acres. The park is made up of diverse ecosystems including forest, wetland, creek, open areas and pond habitat. A pathway used for walking, jogging, and biking, bisects the entire park. Numerous trails branch off the main path system allowing for several choices of entrances and exits for the park.

Various management techniques will be used to administer a broad range of strategies we have developed to enhance the park's natural ecosystem while also providing recreation, relaxation and nature-viewing opportunities for citizens. Additionally, we will take steps in our management plan to alleviate unwelcome and unwanted activities that occur in some parts of the park. We want to provide a safe place for people to visit and enjoy.

We have developed three goals to be carried out for this enhancement project. We feel that these goals address the requirements for healthy ecosystems as well as the various needs of the people of Tigard and surrounding communities.

GOALS

GOAL #1

Remove non-native plant material (i.e. Himalayan blackberry and reed canary grass) to a point where it no longer threatens to create or maintain a dominant monoculture.

- *City staff will provide mechanical and physical methods to remove non-native plant material through grinding, chipping, digging, cutting, spraying, disposal and any other means to remove and control exotic plant species.*

- *Volunteers will provide physical methods to remove non-native plant material through grinding, chipping, digging, cutting, disposing and other means to remove and control exotic plant species.*

GOAL #2

Install appropriate native plant material (trees, shrubs, grass, etc.) to restore and enhance existing ecosystem conditions, create screening, and minimize City maintenance requirements. We will maintain and enhance a mosaic of various natural ecosystems including wetlands, open grass areas, forests, and riparian areas.

- *Focus tree and shrub plantings on the entire length of the creek's banks to create or enhance riparian areas. The riparian areas will provide canopy cover for the creek to promote uniform water temperatures, wildlife habitat, woody debris, erosion control, and soil and water filtration. We will strive to create and/or maintain at least a 30-foot buffer on each side of the creek.*

- *Focus grass and shrub plantings in certain open areas where non-native plant material will be removed. These open areas will provide wildlife habitat, soil and water runoff filtration, and wildlife viewing opportunities.*

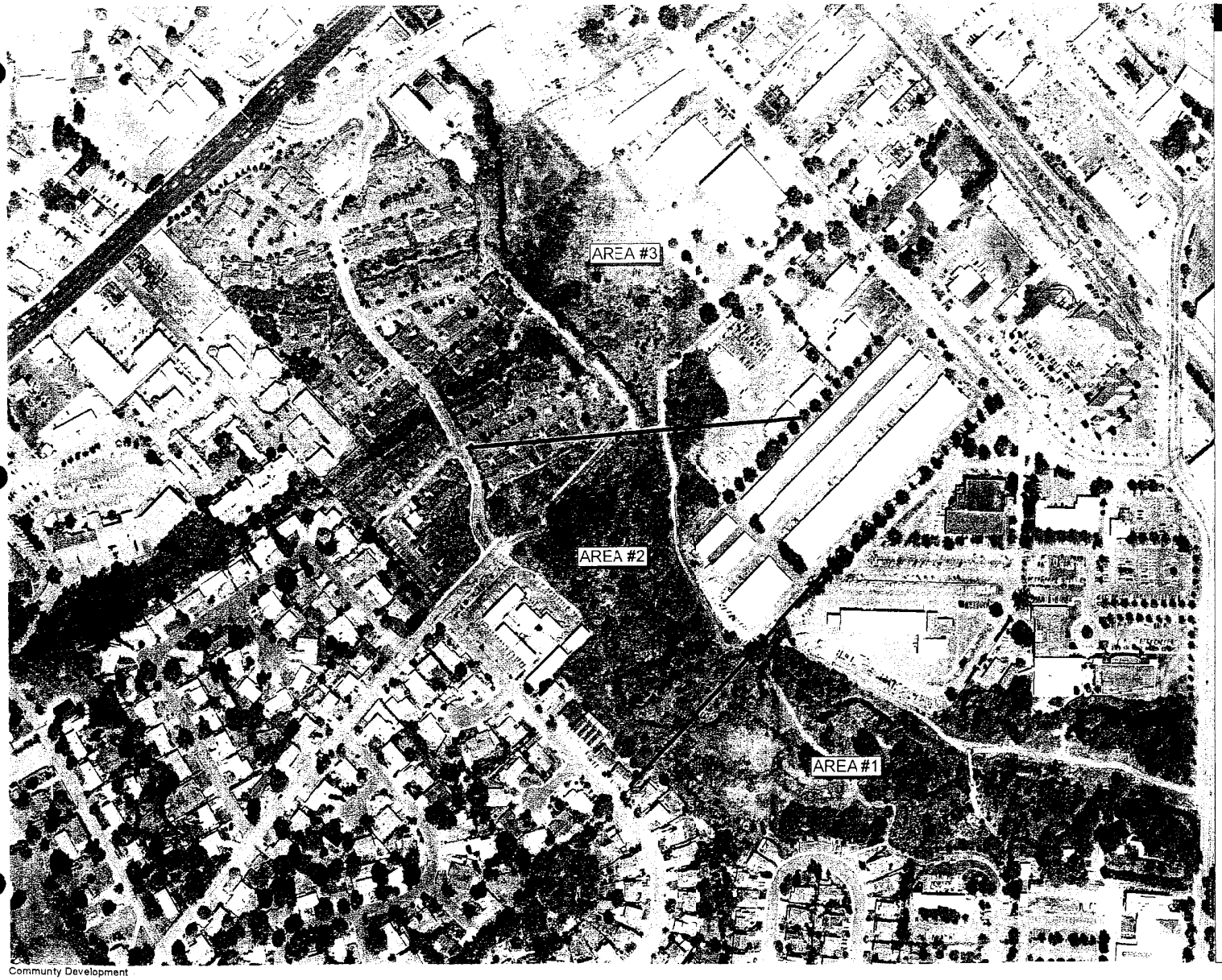
- *Install native plant material. We may alter plant species selection based on survival rates and alternative management objectives.*

GOAL #3

Monitor Fanno Creek Park bi-annually with City staff and volunteers.

- *City staff will monitor the entire park for reinfestations of non-native plant material. As re-entry of exotic plants occurs we will remove the plants by hand, mechanical means and/or herbicide applications.*

- *City staff will monitor the entire park to keep track of the survival rates of the trees, shrubs, and grasses that we planted. The plants that die or are damaged will be replaced or protected.*



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

Fanno Creek Park Enhancement Project

N

0 100 200 300 400 500 Feet

1"= 247 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Plot date: Mar 27, 2001; C:\magic\MAGIC03.APR

Community Development

Area #1

Area #1 has 12 units. Each unit has distinct characteristics that require unique forms of management and/or restoration. We have identified each unit with alphabetical letters. Areas that are not delineated will be left in their present conditions.

Most of the units have blackberry and/or reed canary grass. We will remove the invasive, non-native blackberry and/or reed canary grass, unless otherwise noted. The plants will be removed by hand or mechanically. Each year the sprouts will be sprayed with herbicide to avoid rapid regrowth and infiltration.

UNIT A

Unit A is a small area, approximately a sixth of an acre, which borders Verizon and Burnham Business and Storage Park.

We will plant ten (10)-1.5" caliper native trees such as Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), and hawthorn (*Crataegus*). The trees will provide screening of the two industrial areas located right next to the pathway. We will also plant 15-one-gallon native shrubs which will include vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

UNIT B

Unit B is an area approximately one third of an acre. It is composed mainly of large native Douglas fir (*Pseudotsuga menziesii*), red alder (*Alnus rubra*), willow (*Salix*) and hawthorn (*Crataegus*).

This unit requires under-planting since there is a lack of tree seedlings and saplings growing on site. The creek banks are steep and currently have two dead trees providing some bank stabilization. We will plant the area with approximately 30-one-gallon native trees, 20 native tree whips, and 35-one-gallon native shrubs for creek bank stabilization and canopy regeneration. Species of trees and shrubs such as Douglas fir (*Pseudotsuga menziesii*), red alder (*Alnus rubra*), willow (*Salix*), hawthorn (*Crataegus*), vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood

(*Cornus stolonifera*) will be planted. The plants will be installed every 15 feet on center so that we can attain more complete coverage and better bank stability as the plants grow.

UNIT C

Unit C is a wet, open area approximately one-half an acre. It is recommended that this area remain open. Efforts will be made to restore this area to a native wetland.

Approximately 60% of the area will be planted with 3,200 native sedges, rushes and other wetland plants. The sedges and rushes will be planted every 2 feet on center in the lower, wetter areas of the unit. Additionally, 53-one-gallon native shrubs will be planted in the unit. Thirty of the shrubs will be planted on the higher ground and the remaining ten will be planted among the sedges and rushes. We will choose species that remain low growing so people can have a wide viewing area. Native sedges and rushes such as slough sedge (*Carex obnupta*), soft rush (*Juncus effusus*), and bulrush (*Scirpus*) will be planted. The species of shrubs will include vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

Three benches will be installed, evenly spaced, along the path.

UNIT D

Unit D is a small narrow area approximately .15 acres. It is located along the pathway behind Verizon, which is immediately adjacent, to the west, of Tigard City Hall. Our recommendation for this area is to plant 24-1.5" caliper trees in two rows. We will evenly distribute the Douglas fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), grand fir (*Abies grandis*) and Willamette Valley Ponderosa pine (*Pinus ponderosa*) trees. The trees will act as a natural screen intending to conceal GTE Northwest Inc. from the viewpoints of people in the park. The GTE buildings and parking areas are very evident from Unit E, where we will place 1 picnic table.

UNIT E

Although Unit E is a small area, approximately one-tenth of an acre, we feel that it will serve an important function as a picnic area. There is a path that terminates in this unit. Since there is no outlet, the area is

private and secluded. Two picnic tables will be installed onsite. One picnic table will go on the north side of the path in the same location where a shelter used to be. The other table will go on the south side of the path in an area presently covered by non-native blackberry and reed canary grass. Additionally, we will place one informational sign in this unit describing the surrounding ecosystem and wildlife.

In addition to the non-native weeds, there are numerous native trees such as western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Oregon white oak (*Quercus garryana*) and bigleaf maple (*Acer macrophyllum*). We will plant ten (10)-1.5" caliper trees using the same species that are currently growing on site. Additionally, 25-one-gallon native shrubs will be planted along the stream-bank every five feet on center. Vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*) will be planted.

UNIT F

Unit F is a very small area, approximately .07 acre.

We will plant approximately 20-one-gallon native trees and 20-one-gallon native shrubs. The tree species will be western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Willamette Valley Ponderosa pine (*Pinus ponderosa*), grand fir (*Abies grandis*), willow (*Salix*), and hawthorn (*Crataegus*). Shrubs such as vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*) will be planted. All plants will be installed every 10 feet on center.

UNIT G

Unit G is a wet, open area approximately three-quarters of an acre.

Most of the area will be planted with native wetland rushes, sedges and shrubs. The native sedges and rushes will be slough sedge (*Carex obnupta*), soft rush (*Juncus effusus*), and bulrush (*Scirpus*). The species of shrubs will be vine maple (*Acer circinatum*), oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*). One hundred and seventy five-one-gallon shrubs will be

planted every 15 feet on center. Approximately 8,100 native sedges, rushes and other wetland plants will be planted every 2 feet on center.

Currently there are numerous conifer trees growing on the southern and western portions of the unit. We will plant twenty (20)-1.5" caliper native conifer and deciduous trees among the existing trees. Species such as western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Oregon white oak (*Quercus garryana*), and bigleaf maple (*Acer macrophyllum*) will be planted. Our goal is to provide shade and cover for the wet area.

Five benches will be installed along the perimeter of the unit. The benches will be situated among the trees we will plant as well as the existing trees. Two informational signs will be placed along the unit's perimeter. Signs will be installed along the eastern and western boundaries. These signs will describe the surrounding ecosystem and wildlife.

UNIT H

Unit H is approximately one half of an acre.

This area has been hit hard by beaver damage already. Sixty-five (65)-1.5" caliper native trees and 45-one-gallon native shrubs will be planted in this unit. The tree species will be western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Willamette Valley Ponderosa pine (*Pinus ponderosa*), grand fir (*Abies grandis*), willow (*Salix*), and hawthorn (*Crataegus*). The shrubs will be vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

This area was planted several years ago with native trees and shrubs. Each plant was marked with a white PVC pipe. Unfortunately, the survival rates are very low based on the amount of white pipes compared to the amount of live trees and shrubs. Each plant will be protected using a wire cage supported by two wooden stakes. The bottom of each cage will be sunken into the ground four to six inches to prevent any animals from crawling underneath the cage.

UNIT I

Unit I is a long unit, approximately .70 acres. It is south of the pathway that runs behind City Hall. Currently the area is fairly open with

some patches of young trees and shrubs. Several years ago tree and shrub seedlings were planted throughout the unit. The area extends all of the way up to the sidewalk by SW Hall Boulevard. The amount of live trees in this unit is low so we will plant this area again with 40-one-gallon native trees and 30-one-gallon native shrubs. Additionally, 15-1.5" caliper trees will be planted. Tree species such as western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Willamette Valley Ponderosa pine (*Pinus ponderosa*), grand fir (*Abies grandis*), willow (*Salix*), and hawthorn (*Crataegus*) will be planted. The shrubs will include vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

Six benches will be installed along the path. The benches will be evenly spaced, but alternately facing so that three are facing towards the creek and three are facing the path. Additionally, two signs will placed in this unit. One at the far-eastern boundary, showing the park's name with some wildlife/natural setting design on it. The other sign will be more centrally located and will describe the surrounding ecosystem and wildlife.

UNIT J

Unit J is approximately one fifth of an acre.

We will plant approximately 20-one-gallon native trees, 15-one-gallon native shrubs and ten (10)-1.5" caliper trees within this unit, focusing on the western portion. Native trees such as Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), and black cottonwood (*Populus trithocarpa*) will be planted. Our goal is to conceal the Verizon building and parking lot for people when they are on the trail walking west and on the bridge walking north. Species of shrubs will include vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

Additionally, ten (10)-1.5" caliper native trees and ten (10)-one-gallon native shrubs will be planted close to and around the water area. We will not obstruct the view of the water but we will attempt to shade the area as much as possible by planting within the existing vegetation and exposed areas around the perimeter.

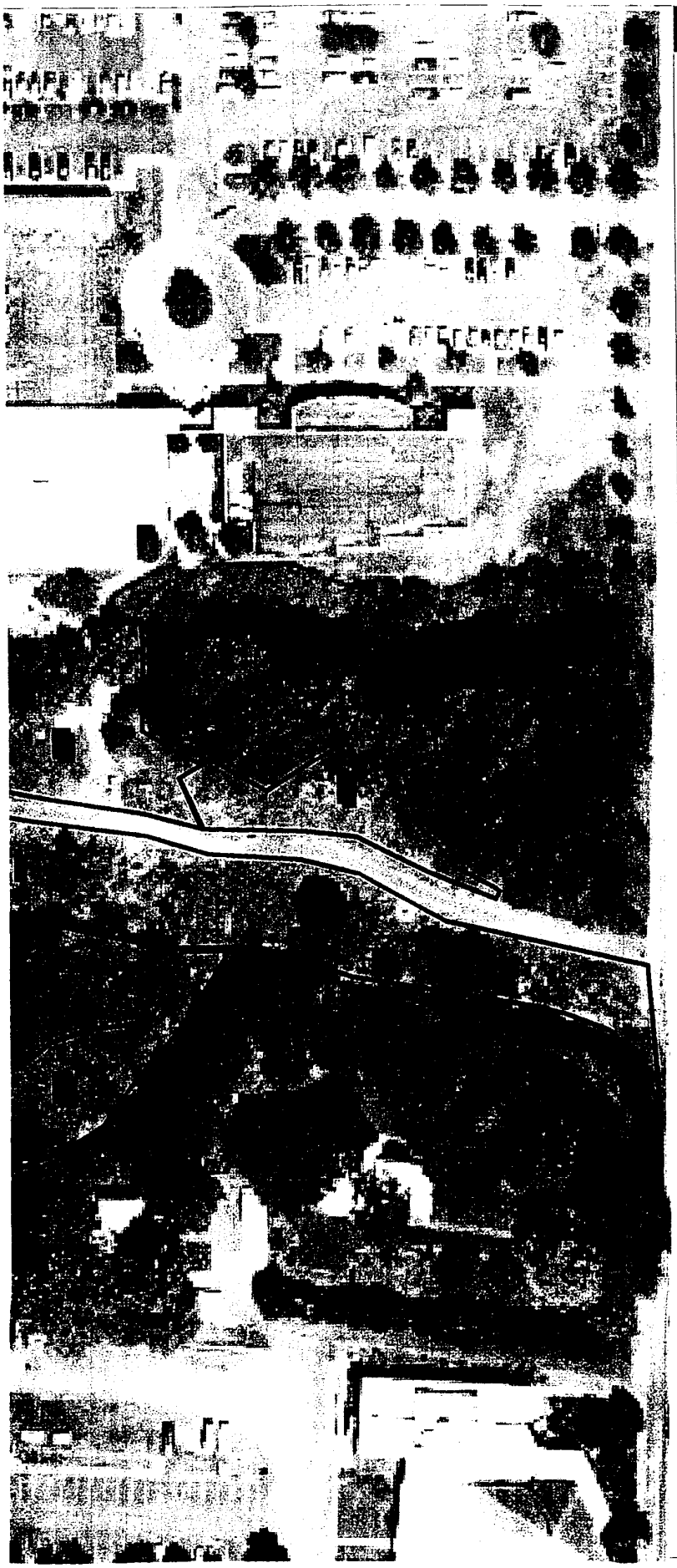
One bench will be installed along the path.

UNIT K

Unit K is approximately one-half acre. This unit will remain pretty much as it is, except we will remove non-native blackberry and reed canary grass on the northwestern side. The area will be maintained through grass cutting, trash collection and shelter maintenance. This area serves as a picnic area for numerous people, including those who work at City Hall. We will install one more bench along the pathway. There will be one sign pertaining to the pond's ecosystem and wildlife installed along the path leading up to City Hall.

UNIT L

Unit L is approximately one fifth of an acre. Approximately 15-1.5" caliper native trees and 15 one-gallon native shrubs will be planted in the exposed areas by the pond. We will not completely obstruct the view from the path but we want to provide shade for the pond. We will plant trees such as Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*) and black cottonwood (*Populus trithocarpa*). Species of shrubs will include vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

Fanno Creek Park- AREA #1

N

0 25 50 75 100 125 150 175 200 Feet

1"= 96 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.

13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Plot date: Mar 27, 2001; c:\maglc\fannocrk.apr

AREA #2

Area #2 has six units. Each unit has distinct characteristics that require unique forms of management and/or restoration. We have identified each unit with alphabetical letters. Areas that are not delineated will be left in their present conditions.

Most of the units have blackberry and/or reed canary grass. We will remove the invasive, non-native blackberry and/or reed canary grass, unless otherwise noted. The plants will be removed by hand or mechanically. Each year the sprouts will be sprayed with herbicide to avoid rapid regrowth and infiltration.

UNIT A

Unit A is approximately half an acre. It is located at the northernmost area in Area 2.

Native trees and shrubs will be planted throughout the area. We will plant 50-one-gallon trees, 25-one-gallon shrubs, and 10-1.5" caliper trees. Our focus will be to plant native trees and shrubs along the creek bank. The area closest to the path will be planted with 10 shrubs and five trees. We want to provide visual clearance into the unit from the path for safety reasons and wildlife viewing opportunities.

The tree species that will be planted are western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Willamette Valley Ponderosa pine (*Pinus ponderosa*), grand fir (*Abies grandis*), willow (*Salix*), and hawthorn (*Crataegus*). The shrubs will include vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

Two benches will be installed along the path at the northwest portion of the unit.

UNIT B

Unit B is approximately 2.1 acres. Our focus for this unit will be to open the area up for visual clearance to the creek from the path. Accomplishing this task will involve, mainly, thinning out most of the low growing plant material and small trees. We will chip the woody material and leave it onsite. We will also remove non-native blackberry and reed canary

grass. Removal will be done mostly by hand since the area is not very open and getting machinery into the area will be difficult if not impossible. We may wish to plant native shrubs along the creek bank to provide soil stability after some of the non-native vegetation has been removed. We will base our decision to plant shrubs along the creek bank on the amount of non-native vegetation we will have to remove and the amount of exposed soil that results.

Three benches will be installed along the pathway. Two of the benches will be along the eastern boundary and the third bench will be along the northwestern border of the unit.

UNIT C

Unit C is approximately 4.75 acres. The area is predominantly open wetland with native and non-native vegetation inhabiting the site.

We will plant the area with a wide range of native sedges, rushes, shrubs and trees. The existing open, wet area will be maintained as such. Approximately 85% of this area will be planted with close to 44,000 native sedges, rushes and other wetland plants. Approximately 920-one-gallon shrubs will also be planted. Native sedges and rushes will include slough sedge (*Carex obnupta*), soft rush (*Juncus effusus*), and bulrush (*Scirpus*). The shrubs that will be planted will be vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

We will plant trees along the creek bank. The species will be Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*) and hawthorn (*Crataegus*). Approximately 150-one-gallon and 20-1.5" caliper trees will be planted.

We will preserve and enhance the open areas for wildlife habitat and wildlife viewing opportunities. Three benches will be installed at the southeast corner portion of the unit. The benches will be along the pathway facing into the unit. Additionally, one sign will be installed along the pathway describing the surrounding ecosystem and wildlife.

UNIT D

Unit D is approximately .10 of an acre. We will plant this area with native trees with the intention of screening Burnham Business and Storage

Park from the rest of the park. A total of 10-1.5" caliper trees which will be Douglas fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), and Willamette Valley Ponderosa pine (*Pinus ponderosa*) will be planted.

UNIT E

Unit E is approximately one acre.

Approximately 30-one-gallon trees, 25-one-gallon shrubs, and 15-1.5" caliper trees along the creek bank will be planted. Tree species such as western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), Willamette Valley Ponderosa pine (*Pinus ponderosa*), grand fir (*Abies grandis*), willow (*Salix*), and hawthorn (*Crataegus*) will be planted. The shrubs will be vine maple (*Acer circinatum*), Oceanspray (*Holodiscus discolor*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and red twig dogwood (*Cornus stolonifera*).

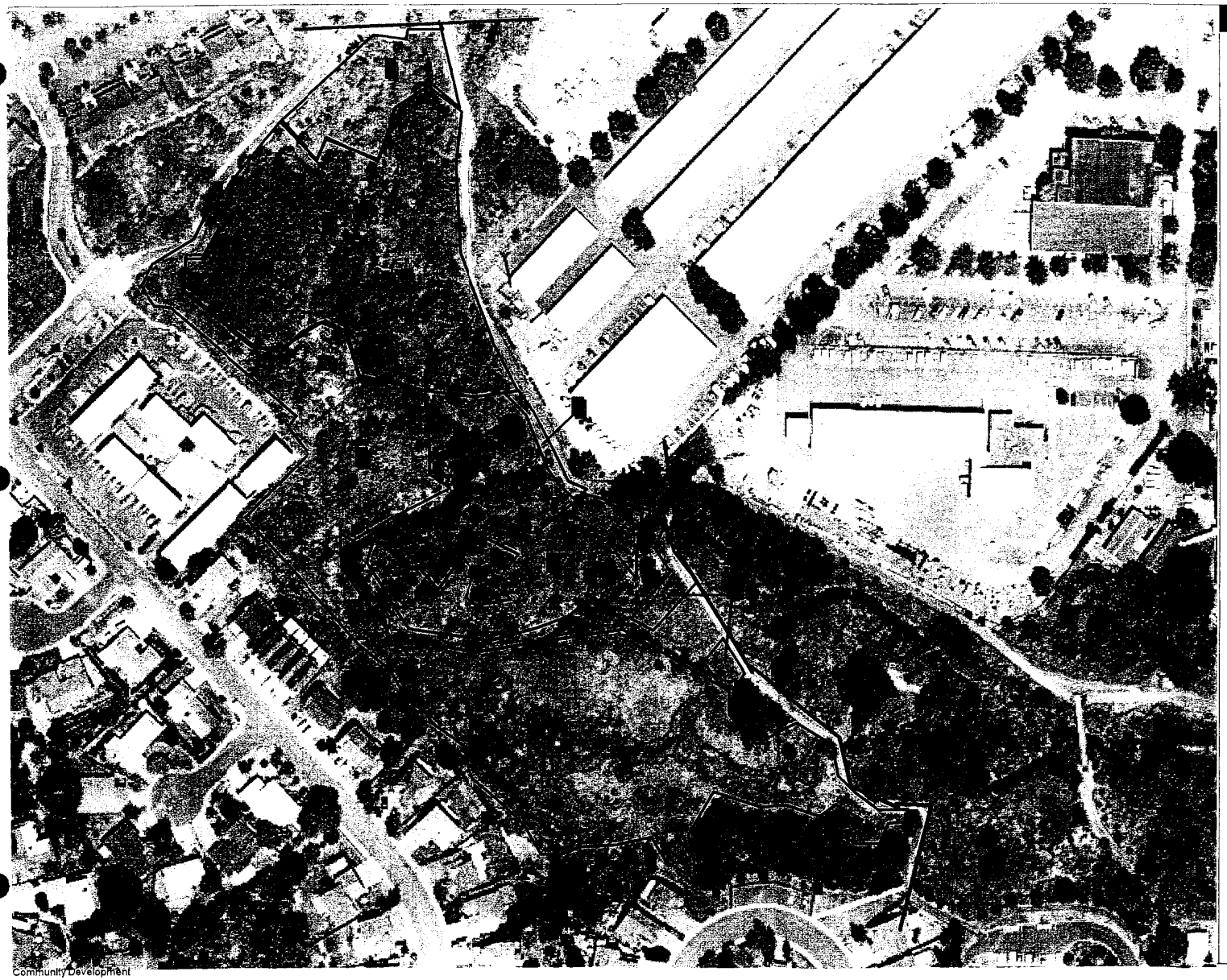
The majority of the unit will be left open. This area provides wildlife viewing opportunities. Additionally, the site could be used as a picnic area in the future.

UNIT F

Unit F is two areas totaling approximately .11 of an acre.

Both areas will be planted with native trees and shrubs. We will plant tree species such as Oregon white oak (*Quercus garryana*), Douglas fir (*Pseudotsuga menziesii*), willow (*Salix*), and Willamette Valley Ponderosa pine (*Pinus ponderosa*). Shrubs such as ninebark (*Physocarpus*), snowberry (*Symphoricarpos*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and redtwig dogwood (*Cornus stolonifera*) will be planted. Approximately 35-one-gallon trees, 25-one-gallon shrubs, and 10-1.5" caliper trees will be planted

The area that splits Unit F will be a future picnic site. We will place a picnic table close to the pathway. Currently, there are numerous naturally occurring seedlings growing on site. We will remove some of the plants to make room for the picnic area.



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

Fanno Creek Park- AREA #2

N

0 50 100 150 200 250 Feet

1" = 120 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Mar 28, 2001; c:\magic\fannocrkpk#2.apr

Area #3

Area #3 has five units. Each unit has distinct characteristics that require unique forms of management and/or restoration. We have identified each unit with alphabetical letters. Areas that are not delineated will be left in their present conditions.

Most of the units have blackberry and/or reed canary grass. We will remove the invasive, non-native blackberry and/or reed canary grass, unless otherwise noted. The plants will be removed by hand or mechanically. Each year the sprouts will be sprayed with herbicide to avoid rapid regrowth and infiltration.

UNIT A

Unit A is approximately 1.4 acres. It is a unique area since it is long and thin and encompasses the entire creek segment of the unit. Our goal for this unit is to remove the non-native blackberry that inhabits the majority of the creek bank by the fall of 2005. When we remove the blackberry we will leave the roots intact to maintain some stability of the bank. We will also leave as much native vegetation onsite as possible. We will, therefore, remove most of the blackberry by hand.

We will plant the bank with native trees and shrubs in the fall of 2005. We intend to plant both seedlings and container-sized plants. Approximately 100-one-gallon trees and 75-one-gallon shrubs will be planted along the creek banks. Plantings will include trees such as western red cedar (*Thuja plicata*), red alder (*Alnus rubra*), black cottonwood (*Populus trichocarpa*), and bigleaf maple (*Acer macrophyllum*). Shrub species will be redtwig dogwood (*Cornus stolonifera*), willow (*Salix*), common snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and evergreen huckleberry (*Vaccinium ovatum*).

As the blackberry begins to grow new shoots, we will apply herbicide to avoid having a heavy reinfestation. Our goal is to allow the blackberry roots to stay alive while the new shrubs and trees become established and increase soil stability. As the native trees and shrubs take over the site, we will control the blackberry more aggressively.

Areas that do not have blackberry problems will be planted in the fall of 2005. An area just north of the bridge by Main Street and an area in the middle of the unit with large trees are two of the locations that need little or no blackberry removal efforts.

Although we are aware of the public's desire to see the creek from the path, our first priority will be to establish native vegetation along the creek bank for soil stability. The amount of plant material required for this goal will be significant and probably will obstruct views of the creek in most places in the unit.

Finally, we will install up to 5 benches along the path. We anticipate that this part of the trail will be heavily used in the near future. The benches will make the area more appealing to travel through. One informative sign describing the surrounding ecosystem and wildlife will also be installed. Another sign, bearing the park's name with a natural setting as a background, will be placed at the entrance to the park at Main Street.

UNIT B

Unit B is approximately 1.8 acres in size. It is located at the eastern portion of the unit.

We will preserve the open space that currently exists. Approximately 175-one-gallon native shrubs will be planted throughout the unit. Additionally, half of the site will be planted with 9,800 native sedges, rushes and other wetland plants. Shrub species will be redtwig dogwood (*Cornus stolonifera*), willow (*Salix*), common snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and evergreen huckleberry (*Vaccinium ovatum*). Native rushes and sedges such as slough sedge (*Carex obnupta*), soft rush (*Juncus effusus*), and bulrush (*Scirpus*) will be planted.

Approximately 20-1.5" caliper trees will be planted along the far-eastern boundary to act as a screen from the businesses adjacent to the site. Douglas fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), hawthorn (*Crataegus*), and bigleaf maple (*Acer macrophyllum*) will be planted.

UNIT C

Unit C is approximately a half-acre. Two separate locations make up the unit. Both locations are located on the western side of Area #3. Most

of the clearing of blackberry bushes will have to occur by hand since there are numerous trees and shrubs in both areas.

Currently, red alder (*Alnus rubra*) trees occupy most of the two locations. We will plant 20-one-gallon red alder in addition to a total of 30-one-gallon western red cedar (*Thuja plicata*) and Douglas fir (*Pseudotsuga menziesii*) trees. Understory shrubs that will be planted include redtwig dogwood (*Cornus stolonifera*), willow (*Salix*), common snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and evergreen huckleberry (*Vaccinium ovatum*). We will plant approximately 30-one-gallon native shrubs in this area.

UNIT D

Unit D is approximately a half-acre. It is an open, wet area with a small pond. Currently, reed canary grass occupies a majority of space in the unit.

The entire site will be planted with approximately 3,200 native sedges, rushes, and other wetland plants in addition to 60-one-gallon native shrubs. The pond provides a wildlife viewing area so we will avoid planting a thick cover of shrubs along the side of the pond adjacent to the path. Shrubs that will be planted will include redtwig dogwood (*Cornus stolonifera*), willow (*Salix*), common snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and evergreen huckleberry (*Vaccinium ovatum*). The native rushes and sedges will be slough sedge (*Carex obnupta*), soft rush (*Juncus effusus*), and bulrush (*Scirpus*).

Currently, there is a fence along the path that keeps people from entering the unit. We feel that this fence should remain since it keeps people and dogs out of the sensitive wet area.

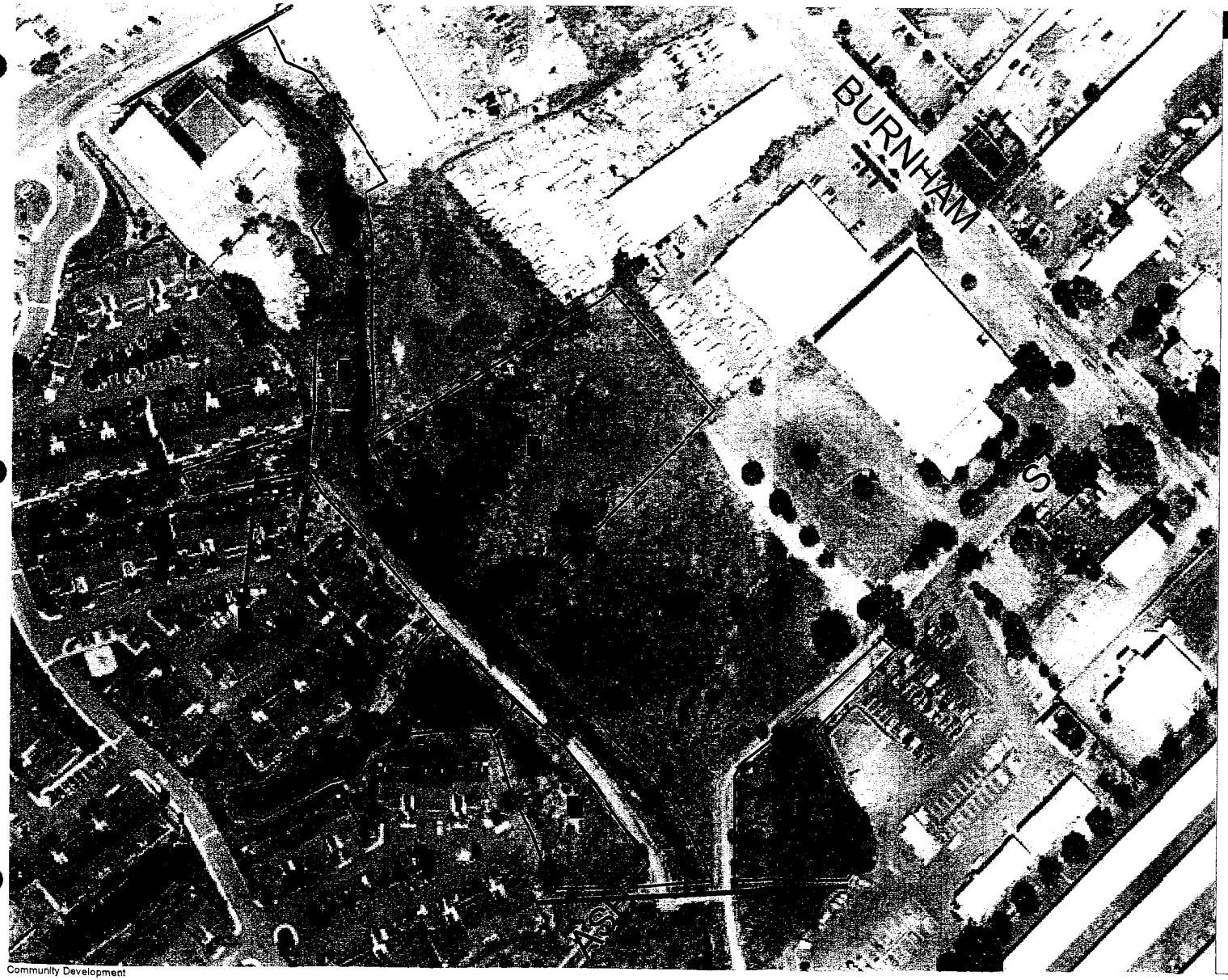
UNIT E

Unit E is approximately a half-acre. The unit is bordered on all sides by the paved path and Public Works' fence.

A large portion of the unit has standing water. We will focus the planting of native trees, shrubs, and grasses around the wet area to create a buffer zone. Currently, hawthorn (*Crataegus*) is dominating the site along with the non-native weeds. We will plant approximately 25-one-gallon western red cedar (*Thuja plicata*), red alder (*Alnus rubra*), bigleaf maple

(*Acer macrophyllum*), and black cottonwood (*Populus trichocarpa*). We will also plant a total of 10-one-gallon hawthorn (*Crataegus*), barberry (*Berberidaceae*), and Darwin barberry (*Berberidaceae darwinii*). These species will be planted due to their size at maturity and colorful appearance along the Public Works' fence and to discourage people from entering the yard. Shrub species will be redtwig dogwood (*Cornus stolonifera*), willow (*Salix*), common snowberry (*Symphoricarpos albus*), salal (*Gaultheria shallon*), spirea (*Spirea douglasii*), and evergreen huckleberry (*Vaccinium ovatum*).

Three benches will be installed along the pathway bordering this unit. Two will be placed along the western boundary and one will be placed along the northwestern boundary.



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

Fanno Creek Park- AREA #3

N

<Empty Scalebar>

1"= 110 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Apr 6, 2001; C:\magic\MAGIC03.APR

Schedule

The Fanno Creek Park Enhancement Plan will take approximately six years to complete. Our targeted date of completion is June 30, 2007. Each area will take two years of improvement work. Follow-up spraying and monitoring will be an ongoing process with no completion date. Much of the work scheduled is dependent on volunteer participation. The availability of volunteers as well as the actual number of people who provide assistance will alter the timelines involved in this plan.

Year 1 (May 19, 2001 - June 30, 2002)

- AREA #1- Remove all non-native blackberry and reed canary grass. Volunteers and city staff will complete the work in at least three volunteer days. The new shoots will be sprayed with appropriate herbicides such as Crossbow, Garlon, or Rodeo in early fall of 2001 and mid-spring of 2002. Parts of Area #1 where no blackberry exists will be planted with trees, shrubs, and/or grasses in the fall and winter of 2001/02.
- AREA #2- Focus on Unit B to remove small trees and brush to increase visibility into the unit from the path. City staff will be clearing unwanted vegetation throughout the year.

Year 2 (July 1, 2002 - June 30, 2003)

- AREA #1- Continue spraying new shoots of blackberry and reed canary grass. Organize at least two volunteer days to plant native trees, shrubs, and grasses. Install picnic tables in areas where they are appropriate. Benches and informational signs will be installed.
- AREA #2- Monitor and control tree, shrub, and brush growth in Unit B. City staff and volunteers will do additional clearing as needed to maintain visual clearance throughout the unit.

Year 3 (July 1, 2003 - June 30, 2004)

- AREA #1- City staff and volunteers will monitor the area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with herbicide in early fall of 2003 and mid-spring of 2004.

- AREA #1- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur if survival rates drop below 50%. Protection devices will be installed if necessary.
- AREA #2- Remove all non-native blackberry and reed canary grass. Volunteers and City staff will complete the work in approximately three volunteer days. The new shoots will be sprayed with an appropriate herbicide in early fall of 2003 and mid-spring of 2004. Parts of Area #2 where no blackberry exists will be planted with trees, shrubs, and/or grasses in the fall and winter of 2003/04.
- AREA #2- Monitor and control tree, shrub, and brush growth in Unit B. City staff and volunteers will do additional clearing as needed to maintain visual clearance throughout the unit.

Year 4 (July 1, 2004 - June 30, 2005)

- AREA #1- City staff and volunteers will monitor the area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with an herbicide in early fall of 2004 and mid-spring of 2005.
- AREA #2- Continue spraying new shoots of blackberry and reed canary grass. Organize at least two volunteer days to plant native trees, shrubs, and grasses. Install the required benches, signs, and picnic tables.
- AREA #2- Monitor and control tree, shrub, and brush growth in Unit B. City staff and volunteers will perform additional clearing as needed to maintain visual clearance throughout the unit.

Year 5 (July 1, 2005 - June 30, 2006)

- AREA #1- City staff and volunteers will monitor the area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with an herbicide in early fall of 2005 and mid-spring of 2006.
- AREA #2- Monitor the entire area for blackberry and reed canary grass reinfestation in addition to controlling tree, shrub, and brush growth in Unit B. City staff and volunteers will perform additional clearing as needed to control non-native invasive plants and maintain visual clearance throughout the unit.
- AREA #2- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur

if survival rates drop below 50%. Tree protection devices will be installed as necessary.

- AREA #2- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur if survival rates drop below 50%. Tree protection devices will be installed as necessary.
- AREA #3- Remove all non-native blackberry and reed canary grass. Volunteers and City staff will complete the work in at least three volunteer days. The new shoots will be sprayed with an appropriate herbicide in early fall of 2005 and mid-spring of 2006. Parts of Area #3 where no blackberry exists will be planted with trees, shrubs, and/or grasses in the fall and winter of 2005/06. Benches and informational signs will be installed.

Year 6 (July 1, 2006 - June 30, 2007)

- AREA #1- City staff and volunteers will monitor the area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with an herbicide in early fall of 2006 and mid-spring of 2007.
- AREA #1- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur if survival rates drop below 50%. Tree protection devices will be installed as necessary.
- AREA #2- Monitor the entire area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with an appropriate herbicide in early fall of 2006 and mid-spring of 2007. Additionally, tree, shrub, and brush growth in Unit B will be monitored and controlled as necessary. City staff and volunteers will perform additional clearing as needed to control non-native invasive plants and maintain visual clearance throughout the unit.
- AREA #2- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur if survival rates drop below 50%. Tree protection devices will be installed as necessary.
- AREA #3- City staff and volunteers will monitor the area for blackberry and reed canary grass reinfestation. New shoots will be sprayed with an herbicide in early fall of 2006 and mid-spring of 2007.

- AREA #3- City staff will monitor the survival rates of the trees, shrubs, and grasses. For tree and shrub seedlings, additional plantings will occur if survival rates drop below 50%. Tree protection devices will be installed as necessary.

July 1, 2007 - Indefinite

- All three areas will be continuously monitored for the survival rates of trees, shrubs, and grasses. New plantings will occur if stockings of trees and shrubs drop below 50%.
- All three areas will be continuously monitored for non-native plant reinfestations.
- Picnic areas will be continuously maintained and monitored for necessary upgrades and repairs.

CITY OF TIGARD, OREGON

RESOLUTION NO. 02-

A RESOLUTION APPROVING SUBMITTAL OF AN APPLICATION FOR A GRANT IN THE AMOUNT OF $39,999 FROM METRO AND THE US FISH AND WILDLIFE SERVICE FOR IMPLEMENTATION OF THE FANNO CREEK PARK ENHANCEMENT PLAN.

WHEREAS, in June 2001, the City prepared an enhancement plan for Fanno Creek that calls for removal of non-native vegetation, planting native plant materials, and conducting biannual monitoring to restore and enhance the health of the stream corridor, and

WHEREAS, Metro and the US Fish and Wildlife agency are soliciting proposals for grants for projects that conserve, restore, and enhance fish and wildlife and their habitat in the Portland/Vancouver area, and

WHEREAS, City staff have prepared an application for a grant of $39,999 and a city match of $68,008 for a total project of $108,007 over six years to fund the Fanno Creek Park Enhancement Plan.

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: An application for a grant of $39,999 from Metro and the US Fish and Wildlife Department to fund the Fanno Creek Park Enhancement Plan is hereby authorized for submittal.

SECTION 2: If the grant is awarded, staff is directed to return to Council for the necessary appropriations adjustments to authorize expenditure of the grant.

PASSED: This _____ day of _____ 2002.

_____
Mayor - City of Tigard

ATTEST:

_____
City Recorder - City of Tigard

Agenda No. 4

Mayor's State of the City Address

No packet materials. Address will be transcribed after the January 8, 2002 meeting.

Contact City Recorder Cathy Wheatley
cathy@ci.tigard.or.us
or call
503-639-4171, ext 309

Agenda No. 5

City Manager's Executive Summary

No packet materials. Outline of the Executive Summary will be available after the January 8, 2002 meeting.

Contact City Recorder Cathy Wheatley
cathy@ci.tigard.or.us
or call
503-639-4171, ext 309

Agenda No. 5

City Manager's Executive Summary

No packet materials. Outline of the Executive Summary will be available after the January 8, 2002 meeting.

Contact City Recorder Cathy Wheatley
cathy@ci.tigard.or.us
or call
503-639-4171, ext 309

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2001

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Tigard Beyond Tomorrow Vision 2001 Report

PREPARED BY: Liz Newton DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

The 2001 Annual Update on the Tigard Beyond Tomorrow Vision.

STAFF RECOMMENDATION

No action is necessary. This is an information item.

INFORMATION SUMMARY

The Tigard Beyond Tomorrow process has now completed its fourth year of working towards the community's long-term goals. The City, school district, and fire district have taken the lead in carrying out some of the action plan items. Others have required the involvement of local businesses, non-profit agencies, volunteer groups, churches, and the community at large.

Goals and activities in 2001 have spotlighted the following themes:

- Enhancing communication;
- Preserving and protecting open space and natural areas;
- Developing alternative modes of transportation; and
- Effectively managing storm water runoff.

Attached is a copy of the PowerPoint slides that staff will use at the January 8, 2002, City Council meeting to highlight the activities in each of the six Tigard Beyond Tomorrow target areas: 1) Community Character and Quality of Life, 2) Growth and Growth Management, 3) Public Safety, 4) Schools and Education, 5) Transportation and Traffic, and 6) Urban and Public Services.

A copy of the 2001 Progress Report is attached. The same report is available at City Hall or on the city's web page. A summary report will be inserted in the February *Cityscape* that goes out at the end of January.

OTHER ALTERNATIVES CONSIDERED

N/A

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Changes to Strategies and Action Plan items are highlighted in the 2001 Progress Report.

ATTACHMENT LIST

The 2001 Progress Report
Copy of PowerPoint slides.

FISCAL NOTES

I:\ADM\CITY COUNCIL\COUNCIL AGENDA ITEM SUMMARIES\TBT VISION 2001 REPORT.DOC

Tigard Beyond Tomorrow 2001 Progress Report

Cook Park Expansion
Phase I
Durham & 92nd Ave.

Cook Park
Boat Ramp

2001 Focus

Greenway, Open Space
Natural Areas and Parks

Enjoy natural areas with wildlife in town!

Fanno Creek Greenway
Burnham & Ash Avenue

Play structure
Summerlake Park

Partnerships between citizens and local service providers are working well. (City of Tigard, Tigard-Tualatin School District, and Tualatin Valley Fire & Rescue)

A remarkable event happened in the Tigard community in the fall of 1996 and throughout 1997. Residents, government professionals, business people, and community group leaders volunteered to work together to determine what should be the community's future. Adopting the name "*Tigard Beyond Tomorrow*," they established a process that would define a vision for our community. Then they identified the resources for implementing that vision through a partnership of individuals and organizations.

The *Tigard Beyond Tomorrow* process has now completed its fourth year of working toward the community's long-term goals. The City, School District and Fire District have taken the lead in carrying out some of the action plans. Other plans have required the involvement of local businesses, non-profit agencies, volunteer groups, churches, and the community at large. Every person and organization that takes part is making our community's vision a reality.

The major goals for *Tigard Beyond Tomorrow* were updated during 2000. Periodically it is important to revisit the direction for the community's future to ensure it is still valid and offer the opportunity to modify or adjust the direction where situations have changed. The citizen-based Vision Task Force accomplished the goal update with input received from a community-wide survey. Part of that update suggested that more coordination of greenways, open space, and natural areas should occur. As you read through this update report you will see this happened during 2001.

Goals and activities in 2001 have spotlighted the following themes:

+ Enhancing communication;
+ Preserving and protecting open space and natural areas;
+ Developing alternative modes of transportation; and
+ Effectively managing storm water runoff.

++

What is in this report? The Vision Task Force didn't stop with just developing a direction for the overall community, but developed direction statements for each of the six areas of review. In the next several pages, the reader will find information on 2001 activity and achievements in each specific target area and the adjustments to the goals. The six target areas are seen below.

What will Tigard look like in 2017? In 1997, the citizen-based Vision Task Force developed the direction for our community and goals to be achieved by 2017. These principles continue to be the overall direction for our community. Following is the community's vision statement.

We, as citizens of the Tigard community, are committed to shaping the community's future in agreement with the direction given through this on-going vision process. This process relies on citizen involvement and participation, and coordinated actions by the community's decision-makers.

Tigard is a safe, dynamic community supported by coordinated and efficient public services. Funding for services is stable and recipients pay their share.

Citizens are educated about how to access public services and understand their responsibility to participate as members of the community.

There are a variety of opportunities for citizens of all ages to access education programs for life-long learning. Our community recognizes and accepts the responsibility each citizen has in promoting and supporting quality education.

Small and local businesses thrive. Business owners are involved and take responsibility for the impacts their businesses have on the community.

A community value "to respect open spaces and natural features" encourages access to these by our citizens. Many leisure time and recreational opportunities are available for our community.

All of these elements work together to promote and protect Tigard's individual identity and quality of life.

What is the next step & how can I get involved? Implementation of the enclosed goals and action plans will occur during 2002. This step is essential to ensure that *Tigard Beyond Tomorrow* continues to be an effective tool to create our future. If you are interested in a particular area of the vision work, please give a call and request more information from one of the organizations listed below.

City of Tigard
13125 SW Hall Blvd
Tigard, Oregon 97223
Phone: (503) 639-4171
TDD: (503) 684-2772
http://www.ci.tigard.or.us

Tigard/Tualatin School District
6960 SW Sandberg Road
Tigard, OR 97223
Phone: (503) 620-1620
http://www.ttsd.k12.or.us

Tualatin Valley Fire & Rescue
20665 SW Blanton Street
Aloha, OR 97007
Phone: (503) 649-8577
http://www.tvfr.com

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Legend for the following report:

Blue language indicates change: ~~strikethrough~~ is language deleted and underlined is language added.
Green language highlights the progress made during 2001.
Pink letters designate special notes.

Tigard Beyond Tomorrow
Community Character & Quality of Life

Direction Statement:

Tigard citizens are involved in their community. Involvement is citizen driven and citizens have the tools to communicate effectively with community-wide decision-makers. Volunteer spirit has been maximized through community-wide coordination of volunteers. Our community supports its volunteers with appropriate training and volunteer recognition. Tigard encourages local, regional and community events. City funding priorities go to events, which move toward financial self-sufficiency, and new community-wide events. Business owners, property owners, and residents of the Main Street Area display strong leadership, ownership, and commitment to downtown development. The Main Street area is seen as a 'focal point' for the community. A clear direction has been established for a pedestrian-friendly downtown and is being implemented. The Tigard community has a defined, proactive vision for community aesthetics. Open space is a priority and new development is required to dedicate open areas for community use.

2001 Progress Summary:

Progress was made in all goal areas. Highlights were most notable in the area of Communication, which was a new goal assigned by the Vision Task Force to the Action Committee. Staff continues to offer information in a variety of formats for access by Tigard residents through continual reassessment and improvements to communication tools, with attention given to two-way communication efforts. A major shift in the goal for Aesthetics was recommended after a joint meeting among the Community Character & Quality of Life, Growth and Growth Management, & Urban and Public Services Action Committees. A request will be made to the Vision Task Force by the Community Character & Quality of Life Action Committee to make this a more broadly stated goal for this action area. In anticipation of a favorable response to this recommendation, many of the action plan items were recommended to be transferred to the Growth and Growth Management Action Committee.

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
Communication #1) Citizen involvement opportunities will be maximized by providing educational programs on process, assuring accessibility to information in a variety of formats, providing opportunities for input on community issues and establishing and maintaining a program of effective two-way communication	1) Improve communication about all aspects of the City's business.	➢ Agenda for City meetings and announcements of events are posted in multiple locations throughout a variety of mediums (e.g., kiosks at retail stores, newspapers, website, cable television, bulletin boards, *Cityscape*, Citizen Involvement Team meetings). ➢ Develop effective ways to share information with citizens and service users (e.g., volunteers, website, email, *Cityscape*). ➢ Communicate information about available social services.	Ongoing Ongoing Ongoing	Council agendas and meeting packets are now posted on the City's website. Citizens can retrieve copies of resolutions and ordinances that have been approved by the City Council. The Council business meetings are cablecast. The *Cityscape* Newsletter format will be updated in 2002. Occasional articles are printed in the *Cityscape* for social service agency programs. The Tigard Public Library maintains a resource list to assist with questions or to refer persons in need to an agency. Also, the City switchboard refers people inquiring about social services to appropriate agencies.
	2) Evaluate the Citizen Involvement Team (CIT) Program	➢ Examine the effectiveness of the use of cable broadcasting facilities. ➢ Continue to use the *Cityscape* to feature the CIT program.	~~New~~ Ongoing Ongoing	A contract is under negotiation (late fall '01) for expanded use of the cable television facilities in Town Hall. In addition, beginning with the January CIT meeting, viewers will be able to e-mail questions to City Hall for a response during live broadcasts of the meetings. CIT meeting agendas continue to be featured in the *Cityscape*.
	3) Encourage public participation through accessibility and education	➢ Continue to make Council meetings (study meetings) accessible ➢ Sponsor Annual Residents Open House for existing and new residents; promote volunteer opportunities ➢ Update the New Citizens Packet ➢ Improve communication of Council decisions in a variety of formats. ➢ Develop community education program on local government and its services	~~Continue~~ Ongoing Ongoing ~~2001~~ 2002 Ongoing ~~Ongoing~~ 2002	Staff greeters and Study Session agendas are provided for people who arrive at Council Meetings to answer questions and to welcome them to attend the Study Session. The City's 40th Birthday Party was the focus in September, 2001. Static displays, interactive activities, and a City Council meeting were devoted to Tigard history and celebrating Tigard's 40th year. New citizens' packets are being updated with assistance from volunteers. The *Cityscape* highlights recent Council decisions and the website also allows residents to access minutes and adopted ordinances and resolutions. CIT & its cable-aired format is used to educate citizens along with the *Cityscape* Newsletter and the City's web site. Additional programming and public service announcements are planned for 2002.

Community Character & Quality of Life - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
Volunteerism #1) City will maximize the effectiveness of the volunteer spirit to accomplish the greatest good for our community	1) Keep current volunteer program healthy and active	➢ Maintain an inventory of current volunteer opportunities ➢ Continue to sponsor "Make a Difference Day" ➢ Maintain a Volunteerism Program for students ➢ Continue to use *Cityscape* to facilitate the Volunteer Program	Ongoing Annual Event Ongoing Ongoing	The Volunteer Coordinator maintains a current inventory. In October, the annual Make a Difference Day was a success. 65 volunteers planted nearly 200 trees and shrubs as well as 150 spring bulbs and provided lots of assistance at the Library. Volunteer coordinators for City Hall and the Library continue to find opportunities for students. Articles appear in the *Cityscape* on a regular basis; often more than one article per issue appears featuring volunteer opportunities coming up or to thank volunteers for projects completed.
Central Business District (CBD) #1) Provide opportunities to work proactively with Tigard Central Business District Association (TCBDA) businesses and property owners and citizens of Tigard to set the course for the future of the central business district.	1) Work proactively with TCBDA for long-term planning.	➢ Consider financing options and opportunities proposed by the TCBDA (e.g., Economic Improvement District). ➢ Determine levels of City planning and engineering resources that can be utilized by the TCBDA.	Ongoing Ongoing review	TCBDA withdrew proposal to form Economic & Business Improvement District (EID) (BID) after objections were received from more than 33% of the business owners and property owners about EID/BID formation. TCBDA is reviewing what direction to take next. This was a Council goal for 2001 for support of the downtown improvements and staff resources were utilized to support progress on this goal.
	2) Monitor City's regulations for the Central Business District.	➢ Review zoning code - how does it support the TCBDA mission statement * ➢ "Court" family-oriented business through design criteria * ➢ Explore grant programs and/or matching funds ➢ Revise parking regulations in Central Business District * ➢ Develop long-term strategy w/ODOT re: 99W widening & affects on CBD	2001/02 ~~2001~~ 2002 ~~2001~~ 2002 ~~2001~~ 2002 Ongoing	Most items that are marked with an asterisk (*) are on hold until the outcome of Measure 7 is known. Council decided to approve new parking standards in the downtown area to make it easier for business improvements to take place.
	3) Develop strategies for public improvements in Tigard's central business district area (this area includes Main Street) and adjacent areas.	➢ Develop "gateway" portal improvements (e.g. "Welcome to Tigard") ➢ Install special street-lighting fixtures reflecting theme. ➢ Showcase Fanno Creek Park – use as a connection to the community ➢ Install public restrooms ➢ Develop pedestrians/bicycle connectivity ➢ Establish an area in the central business district as a focal point for public gatherings and community events ➢ Coordinate all of the above with TCBDA	2003	Progress in this area can be made once financing options are in place. At the end of 2001, TCBDA is reevaluating how to proceed with financing options after the Economic Improvement District effort encountered resistance by more than one-third of the business and property owners in the downtown area.

Volunteer Opportunities with the City of Tigard -

* = Dependent on the outcome of Measure 7 court case.

Fire Hydrant Painting

Adopt-a-Path Program

Landscaping at the Sorg Rhododendron Garden

Planting a tree for the future

Cleaning up Summerlake Park

Community Character & Quality of Life - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
Community Events #1) Develop overall approach for sponsoring community events that establishes balance among popular or traditional standing events, requests for support of new events and limited City resources	1) Maintain philosophy developed for City event sponsorship	➢ Consider new City events to carry out Council's philosophy ➢ Encourage adding more community-based events rather than "destination" events (e.g., Balloon Festival) ➢ Create a study group to look at other community events	Ongoing Ongoing ~~2001/02~~ 2002/03	The City supported two new events in 2001: the Tigard Blast and the City's 40th Birthday Celebration. In addition, the City of Tigard is working with the Olympic Committee to sponsor the Torch Run, which will come through the City of Tigard in January 2002.
	2) Develop an understandable, step-by-step process to assist event volunteers	➢ Develop "how to" packets for event organizers to assist event planning and coordination. ➢ Evaluate City insurance umbrella policy; consider riders for sanctioned events. ➢ Encourage events, such as Tigard Farmer's Market and Tigard Country Daze, to be centrally located in the Central Business District area.	~~2001~~ 2002 ~~2001~~ Ongoing Ongoing	No progress made on the "how to" packet. Reschedule for completion in 2002. Insurance needs for events considered on a case-by-case basis. Tigard Blast took the place of "Tigard Country Daze" and was produced through efforts of downtown merchants with assistance from City staff.
#2) On-going community-events are financially self-sufficient long-term.	See Action Plan notes.	➢ Council developed philosophy for City events in 1998. This was not identified as a criterion for consideration of funding for a community event.	--	--

Tigard Balloon Festival – Cook Park

Tigard Blast – Downtown Main Street

Community Character & Quality of Life - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
Community Aesthetics #1) Develop strategies to balance needs of new and infill development with need to provide preservation and protection of open space, natural areas and other defined aesthetic qualities valued by those who already live and work in Tigard.	1) Balance development and aesthetic needs	➢ Develop a list of methods for dedication or acquisition of open space.	2002	Community Development Staff will prepare a list.
		~~➢ Find common, cohesive building and design look for areas within the City (e.g., Tigard Triangle, Washington Square, Central Business District).~~		*
		~~➢ Provide specific strategies for natural areas, open space, and tree preservation and protection to balance growth.~~	~~Unknown~~	*
		➢ Consider design of portal areas into Tigard to give the community a more defined entrance (e.g., special signage, landscaping themes, etc.)	2002/03	Discussed briefly during Council review of sidewalk maintenance proposals. Keep as potential project for the next year or two.
		~~➢ Review Development Code to balance aesthetic needs with developer needs *~~	~~Unknown~~	*
		~~➢ Define terms such as "open space" and "scenic view" in the Development Code *~~	~~Unknown~~	*
		~~➢ Consider establishing a design review committee within the Planning Commission.~~	~~2002~~	*
		~~➢ Establish aesthetically pleasing designs for roadways *~~	~~2003~~	Responsibility in this area transferred to Growth and Growth Management Action Committee and the Transportation and Traffic Action Committee
		➢ Support a "community arts" effort of City staff, Tigard Tualatin School District staff, and citizens for acquisition and display and construction of community art projects.	Ongoing	Committee has been formed. Fowler Middle School students developed a project for the traffic island at Tiedemen/Walnut Streets.
		~~* Dependent on the outcome of Measure 7 court case. If the ballot measure, approved by voters on November 7, 2000, is deemed constitutional, then some of the action steps may need to be deleted or altered.~~		* = Responsibility in this area transferred to Growth and Growth Management Action Committee. That Committee will develop appropriate Strategies and Action Plans.

QUESTIONS OR COMMENTS? Please contact the following staff person: Cathy Wheatley, City Recorder, 503-639-4171 ext. 309 e-mail cathy@ci.tigard.or.us

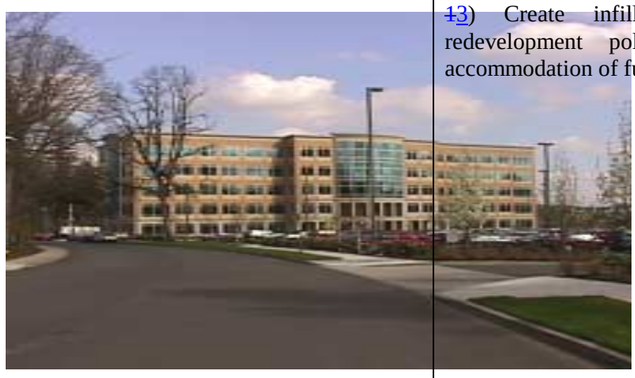
Tigard Beyond Tomorrow
Growth & Growth Management

Direction Statement:

Tigard continues to grow. Growth is accommodated while protecting the character and livability in new and established neighborhoods. The City encourages and supports private sector programs to maintain diverse and affordable housing. Urban services are provided to all citizens within Tigard's Urban Growth Boundary. Recipients of services pay their share. Local and small businesses are encouraged as an important part of our community and our economy. The City of Tigard is an active participant in regional issues. Its citizens are educated about issues in our region and take advantage of opportunities to participate in decision-making processes.

2001 Progress Summary:

Planning and growth management issues have been addressed by numerous actions. The Washington Square Regional Center Plan Task Force and Technical Advisory Subcommittees concluded work related to Phase II, Implementation of the Plan. The Task Force recommended implementation of the plan to City Council. The Bull Mountain Annexation Study was completed and reviewed by Council in November, 2001. The Tigard Central Business District Association evaluated funding options for the downtown (Main Street) area. The Transportation System Plan, identifying transportation needs through 2020, is completed and scheduled for Council consideration in January, 2002.

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#1) Growth while protecting the character and livability of new and established areas while providing for natural environment and open space throughout the community.	1) Review and modify development code sections to integrate open space preservation and protection into design standards.	➢ Analyze code sections to indicate amount of open space in residential development in Tigard. ➢ Evaluate code to assure that design of transportation facilities include natural features and promote connectivity to open space, greenways, and natural area access.	2003-2004 2004-2005	New strategy New strategy
	2) Develop and implement design standards that preserve and protect open space, greenways, and natural areas.	➢ Amend code to promote design that includes natural features and promotes connectivity to open space, greenways, and natural area access. ➢ Develop a public process for adequate development/design review.	2003-2004 2004-2005	New strategy New strategy
	~~13~~) Create infill, increased densities and redevelopment policies to allow compatible accommodation of future growth.	➢ Evaluate infrastructure needs to accommodate infill, redevelopment and increased densities. ➢ Consider commercial zoning on Bull Mountain when expansion of Urban Growth Boundary occurs. ➢ Evaluate whether it is appropriate to maintain the ability for new residential development on large lots ➢ Protect natural resource areas from the impacts of increased growth ➢ Provide an educational element that informs and educates the public ➢ Parks financing – break the stalemate with County to get Parks System Development Charges (SDCs) charged to developing lands within the Urban Growth Boundary.	~~10/97-12/01~~ 2002 ~~10/98-7/03~~ 7/03-7/04 7/03-7/04 Ongoing Ongoing ~~6/01~~ Ongoing	➢ The Washington Square Regional Center Plan evaluates infrastructure needs in that area. ➢ The County retains land use authority. ➢ Existing zoning allows large lot development in specific areas. ➢ New standards are under consideration to protect natural resources. The City is working with Metro on developing new standards for riparian corridors-Goal 5 ➢ Education program is under development. ➢ A workshop meeting with County Commissioners was held; there have been subsequent discussions and follow-up letters.
	~~24~~) Address the Tigard Town Center and the areas designated as Corridors in the 2040 Growth Plan.	➢ Address pedestrian issues in the Town Center ➢ Initiate community planning for commuter rail ➢ Consider redevelopment of existing industrial land in the Town Center. ~~➢ Review corridor densitites to determine whether densitites are appropriate.~~ ➢ Provide an educational element that informs and educates the public.	~~10/98-12/02~~ Ongoing 2003-2004 ~~10/97-12/02~~ Ongoing Complete ~~10/97 – 12/02~~ Ongoing	➢ Pedestrian related standards were incorporated in the Tigard Town Center Plan and the Transportation System Plan. ➢ New strategy ➢ Ongoing ➢ Densities were evaluated and adopted. Title I of Metro Functional Plan establishes strategies. City of Tigard complies with Metro. ➢ Metro is the lead agency in developing educational programs. The City is working very closely with Metro to educate the public about the 2040 Growth Plan.

Growth & Growth Management - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
	~~3~~5) Address planning and growth issues associated with the Regional Center.	➢ ~~Explore the impacts of annexation of some or all of the Metzger area~~ ➢ ~~Explore accommodation of higher densities in the Regional centers.~~ ➢ ~~As part of the Regional Center Master Planning effort, incorporate larger study area.~~ ➢ Provide an educational element that informs and educates the public.	~~10/97-12/02~~ Complete ~~10/97-12/01~~ Complete Complete Ongoing	➢ The Metzger area was incorporated in the Washington Square Regional Center Plan area, which evaluated development patterns in Metzger. ➢ The Washington Square Regional Center accommodates higher densities. ➢ Washington Square Regional Center establishes larger study area, incorporating portions of Beaverton and Washington County. ➢ Metro has several educational programs. The City incorporates Metro program elements in its efforts to educate the public (pamphlets, etc.).
#2) Urban services are provided to all citizens within Tigard's urban growth boundary and recipients of services pay their share	~~1) Adopt a plan for the orderly annexation of Walnut Island~~	➢ ~~Create agreement with County that establishes under what conditions City will accept County facilities~~	~~12/97 – 12/01~~ Complete	➢ Walnut Island was annexed in May, 2000.
	1~~2~~) Adopt criteria that outlines when and under what circumstances areas on Bull Mountain will annex	➢ Provide targeted education program aimed at newcomers and specific Bull Mountain areas. ➢ Reach agreement with Wash. County that allows full provision of services by City including police service and annexation. ➢ Expand ability to get annexation waivers for provision of sewers to Bull Mountain. ➢ Create agreement with County that establishes under what conditions City will accept County facilities.	~~2000-2001~~ 2001-2002 2001-2002 ~~2001~~ Ongoing 2003-2004	➢ The Bull Mountain Annexation Study was completed, which provides the basis for targeting an education program for newcomers. ➢ The Bull Mountain Study evaluates the provision of services. Program is under development. ➢ Under review. ➢ Program under development.
	2~~3~~) Adopt a plan to educate Metzger residents about annexation to Tigard	➢ ~~With area west of Hall as priority, create public info program that uses CP04 as a partner, reaches out to newcomers, emphasizes benefits of joining Tigard and emphasizes the retention of Metzger's identity~~ ➢ ~~Explore costs of providing needed infrastructure to Metzger, i.e. storm sewer~~ ➢ ~~Negotiate agreement with Wash. County that clearly outlines their role in the provision of urban services, including provision of police services.~~ ➢ Provide targeted education program aimed at newcomers and specific Metzger areas. ➢ Reach agreement with Wash. County that allows full provision of services by City including police service and annexation. ➢ Expand ability to get annexation waivers for provision of sewers to Metzger. ➢ Create agreement with County that establishes under what conditions City will accept County facilities.	~~2002~~ ~~2001~~ ~~2003~~ 2003-2004 2005-2006 2005-2006 2004-2005	➢ The Growth and Growth Management Action Committee chose to substitute these action plans with new action plans modeled after the Bull Mountain approach. ➢ New action plans
	3~~4~~) King City and City of Tigard common Urban Growth Boundary annexation	➢ Explore existing city boundaries with King City, the urban growth boundary down to the Tualatin River for possible annexation.	~~2005~~ 2004	➢ Ongoing discussion. Metro started a new process to expand the Urban Growth Boundaries.

Growth & Growth Management - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#3) Partnerships for advocacy for development of additional units and preservation of affordable housing are encouraged and supported by the City and the community.	1) Implement a program to educate Tigard citizens about the importance of affordable housing	➢ Start community dialogue on issues associated with affordable housing ➢ Define community goals for affordable housing to determine target ➢ Prepare written materials that reflect the community's goals ➢ Develop outreach program including Cityscape articles, press releases, speaking opportunities, outreach to businesses, churches, senior centers and community based organizations ➢ Implement outreach program ➢ The term affordable housing needs definition and to be better understood by the community. ➢ Ensure that mobile homes are considered as affordable housing. ➢ Public understands the resources that are available and the process to access them.	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	➢ City participates in the Housing Advocacy Group (HAG), which supports affordable housing. ➢ Educating public is one of the primary goals. ➢ HAG activities include monthly meetings, an intranet site, and an annual Housing Symposium. ➢ Same as above. ➢ Same as above. ➢ N/A ➢ The Tigard Development Code allows manufactured dwellings in single family residential zones, which increases affordability of manufactured homes throughout the City. ➢ N/A
	2) Make incentive programs available to providers of affordable housing units	➢ ~~Form study committee~~ ➢ ~~Committee consider waiver or reduction of SDCs, tax abatement for non-profits, and/or property tax reductions for affordable housing projects~~ ➢ Committee consider targeting financial incentives to specific areas of the City ➢ ~~Study committee report issued to City Council~~ ➢ Council consideration of recommendations of study committee ➢ Implement Council direction ➢ Develop outreach program to "advertise" incentives	~~12/01~~ Complete Complete Ongoing Complete 2002-2003 Ongoing 2002-2003	➢ Housing Advocacy Group (HAG) formed. ➢ Tigard provides a property tax exemption for low-income housing owned and operated by Partners for Affordable Housing. ➢ City has three Community Development Block Grants to improve roads and sidewalks around the Villa La Paz project. ➢ Council established fee subsidy program to providers of affordable housing. ➢ Under development ➢ Under development

Row homes in Tigard

Growth & Growth Management - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
	3) Review City's zoning code and Comprehensive Plan policies to provide maximum opportunities for affordable housing	➢ Consider minimum densities, inclusionary zoning & density bonuses as tools to encourage affordable housing ➢ Incorporate code language into Development Code to require minimum densities and inclusionary zoning and for density bonuses to encourage affordable housing ➢ Develop a mechanism to track affordable housing units constructed	12/03 12/03 12/03	➢ Housing promotion tools related to zoning delayed until effects of Measure 7 are better known. ➢ Minimum densities adopted ➢ Council established 100 units as target for affordable housing.
	4) Incorporate affordable housing policies into study of Downtown, Washington Square, and other mixed use areas	➢ ~~Identify opportunities to provide affordable housing in mixed use areas~~ ➢ ~~Include discussions on affordable housing in public workshops in mixed use areas~~ ➢ ~~Write policies & zoning code language to reflect desired affordable housing opportunities in mixed use areas~~ ➢ ~~Implement policies~~ ➢ ~~Consider jobs/housing ratio as an incentive to focus housing~~	~~12/01~~Complete Complete Complete Complete Complete	➢ The Washington Square Plan is supportive of increased density, up to 50 units per acre in some areas. Citywide housing policies are applicable to the downtown area. No specific program for the downtown area was developed. ➢ Same as above ➢ Washington Square Regional Center Plan provides potential for provision of affordable housing through increased zoning densities. The Washington Square Regional Center Implementation Plan is scheduled for Council consideration in January 2002.
	5) Strengthen ties between City, Wash. County, and other Wash. County cities to jointly provide affordable housing services	➢ Hold summit on affordable housing with policy makers, develop community and technical resources to identify issues ➢ Summit follow-up to consider jointly providing technical assistance for developers of affordable housing ➢ Consider increase in number of Wash. County subsidized units allowed in Tigard	Ongoing Ongoing Ongoing	➢ The City participates in HAG and the annual Housing Symposium. ➢ Washington Square Regional Center provides for jobs/housing ratios. ➢ Mayor's Blue Ribbon Committee was established. It will look at affordable housing.
	6) HOMELESS - Implement programs aimed at preventing homelessness	➢ ~~Identify available resources.~~ ➢ Develop resource brochures for distribution that identify community resources ➢ Develop landlord education programs to be held quarterly that provide tools to help prevent homelessness ➢ Develop resource center for services that may impact homelessness ➢ Identify resources available for emergency housing, such as vouchers	~~2001~~Complete 2003-2004 2003-2004 2003-2004 2004-2005	➢ The City financially supports the Good Neighbor Center located on Greenburg Road. ➢ City will coordinate its efforts with the County through its Vision West program. ➢ Same as above ➢ Same as above ➢ Same as above
	7) HOMELESS - Investigate tools to provide emergency housing	➢ Identify potential providers/agencies that provide info on emergency housing ➢ Prepare written materials to distribute regarding emergency housing ➢ Provide phone number with recorded information for emergency housing	Ongoing Ongoing Ongoing	➢ City cooperates with the American Red Cross, which is taking the lead on the provision of emergency housing for all action plans.

Growth & Growth Management - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#4) Local and small businesses are encouraged as an important part of our community and economy.	1) Retain and assist local businesses	➢ Assure input is received from local businesses as development codes are developed ➢ Assure that planning and transportation efforts develop, local business access and "friendly" site design is included ➢ Explore tax incentive to encourage & recruit new small businesses in Tigard	2000-2003 Ongoing Ongoing	➢ Ongoing ➢ Ongoing ➢ Tigard Central Business District Association provides assistance to local and new businesses in the downtown area.
#5) The community is able to effectively participate in decision-making processes because they understand the land-use system.	1) Develop land use education program	➢ Prepare written materials on land use program. ➢ Complete CIT program on land use processes.	Ongoing Ongoing	➢ Under development. ➢ Land use educational program was developed for CIT.

QUESTIONS OR COMMENTS? Please contact the following staff people:
Barbara Shields, Long Range Planning Manager, 503-639-4171 ext. 315 e-mail: barbaras@ci.tigard.or.us or Jim Hendryx, Community Development Director, 503-639-4171 ext. 405 e-mail: jimh@ci.tigard.or.us

Visit the Tigard downtown area
(SW Main Street off of 99W)

Growth will happen in Tigard
How we plan for growth
will make the difference!

Tigard Beyond Tomorrow
Public Safety

Direction Statement:

Tigard is a safe place to live, play, and do business, with efficient public safety services coordinated by police, fire, and emergency management providers. Citizens and businesses are well educated about public safety services; Tigard's citizens understand their role and responsibilities for the safety of themselves and their community, and businesses take a proactive role for their responsibility in protecting their investment in the community. Public Safety service providers plan for their service delivery in such a way as to minimize the negative impacts of the regional populations that travel to and through our community each day. Stable funding provides uninterrupted public safety services at desired levels.

2001 Progress Summary:

The Enhanced Safety Property designation for the Villa La Paz apartment has been re-certified and continues. Progress has been made on upgrading existing neighborhood watches and new ones have been added. Formal public safety and crime related presentations have started for different groups in the City. Partnership agreements are being formed to address specific safety & crime issues. Crime prevention through environmental design continues with all plans being reviewed and TVF&R is putting together a neighborhood preparedness-training program for residents. We have exercised our emergency operations plan and updated information on the City's website with emergency information for residents.

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#1) The community residents, business owners, and service providers understand their roles through effective communication to successfully enhance public safety and emergency services	1) Re-energize existing neighborhood watch areas	➢ Determine status of existing Neighborhood Watch areas ➢ Educational promotion for existing Watch Programs ➢ Measure effectiveness of Active Watch Programs	Ongoing Ongoing Ongoing	Programs are continuing on an "ongoing" basis.
	2) Expand Neighborhood Watch Program	➢ Develop Watch Programs in additional or new neighborhoods ➢ Educational promotion for new Watch Program areas ➢ Measure effectiveness of active new Watch Programs	Ongoing Ongoing Ongoing	Recruitment process is ongoing for new Neighborhood Watch areas.
	3) Implement Crime Prevention Through Environmental Design (CPTED) to assist efficient and effective public safety response to calls for service	➢ Implement CPTED with Public Safety providers reviewing and commenting on all land use applications received by the City	Ongoing	CPTED reviews continue.
	4) Implement Enhanced Safety Properties Program (ESP) to assist safety and emergency responses to multi-family complexes	➢ Implement ESP program with multi-family dwelling units (apartments) within the City ➢ Increased emphasis through education will be provided for the ESP	Ongoing	Villa La Paz has successfully completed all the requirements for re-certification as an ESP property.
	~~5) Conduct survey of businesses to determine public safety/emergency services needs~~	➢ ~~Survey downtown businesses for crime prevention needs~~ ➢ ~~Hold quarterly crime prevention meetings with downtown merchants~~	Completed	The business survey was completed. Liaison Officer appointed for Main Street business district.
	~~6~~5) Develop business crime prevention program for the Main Street business area.	➢ Educate downtown merchants	Ongoing	Ongoing education program.
	6) Specifically address crime and public safety concerns through partnerships.	➢ Form partnership agreements to address issues ➢ Develop partnership forms to be agreed to by partner and police to address concerns ➢ Establish criteria of responsibility for partner and police to address issues ➢ Track number of agreements, success rate and results	Ongoing	Partnership agreements have been formed. Ongoing efforts, more being added
	7) Fire Safety education will be effectively promoted within the community.	➢ Education will be targeted to the residential and business communities ➢ TVF&R will re-evaluate the business self-inspection program.	2001 & 2002 Ongoing	TVF&R developed a new public education program with an emphasis on Fire Safety during 2001. The program consists of multiple fire safety messages being delivered in multiple venues throughout the City. The new program begins in January of 2002. TVF&R continually re-evaluates the self-inspection program for effectiveness. The District is continuing the use of the business self-inspection program.

Police instructors at recent Bicycle Rodeo

Public Safety - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#2) Develop long-term, stable funding sources to ensure efficient, uninterrupted public safety and emergency services	1) Review Fire and Emergency Management service funding mechanisms already in use nationwide Note: No new strategies for Police or Fire in 2001	➢ ~~Conduct information search~~ ➢ ~~Review information~~ ➢ ~~Gather more detailed info. re: programs that Tigard wishes to consider using~~ ➢ ~~Present funding alternatives to City Council/Budget Comm. and Fire Board~~ ➢ ~~Decision by Council/Board regarding how to implement report findings~~	~~2001 & 2002~~ Completed	There have been no new strategies for funding emergency management. The Fire District and Police Department have researched funding mechanisms used for service. Currently the District and City have not found any funding mechanisms that would be applicable in our area.
#3) The community is trained and prepared for emergencies	1) Develop community-wide program to train citizens to be self-sufficient for the first 72 hours after an emergency event	➢ Educate citizens to be self-sufficient for the first 72 hours after disaster strikes ➢ Develop an Emergency Response Coalition ➢ Educate Coalition to understand purpose, emergency types, define training by group (seniors, bilingual, homeless, etc.) ➢ Develop short term goals ➢ Determine what needs are out in the community ➢ Develop work plan for coalition for next 3 years ➢ Service providers share their prepared state with the community. ➢ Business readiness for disasters is a special focus of the training program	Ongoing	TVFR developed a new disaster preparedness curriculum/program which will begin being delivered in the spring of 2002. The program prepares citizens to be self-sufficient for 72 hours. The Fire District and the City have agreed to partner in a cooperative effort. The Fire District will provide the program and the trainers and the City will publicize classes and handle all logistical concerns.
	2) Coordinate Tigard emergency response providers	➢ Develop Tigard Emergency Response Work Group for responders to regularly meet to determine joint needs and coordinate efforts ➢ Hold regular meetings for information sharing ➢ Modify response plans based on exercise/real life response experiences ➢ Conduct annual exercise of response programs	Ongoing Ongoing 2001-2003 Ongoing	Tigard is represented on the TVF&R Overhead Team and participates in quarterly exercises. Tigard employees are trained in various incident command system programs, to respond to emergencies. City staff attends various training sessions and participates in County-wide emergency exercises.

QUESTIONS OR COMMENTS? Please contact the following staff person: Ronald Goodpaster, Chief of Police, 503-639-4171 ext. 218 e-mail: 00859@ci.tigard.or.us or Ed Wegner, Tigard Emergency Manager/Public Works Director, 503-639-4171 ext. 396 e-mail: ed@ci.tigard.or.us or Mark MacDonald, Tualatin Valley Fire & Rescue, Battalion Chief, 503-271-1927 (pager) email: macdonmf@tvfr.com

Child Safety Seat Clinic
featured two Crash Dummies

Police Chief Goodpaster instructing
at the Police Citizens Academy

Tigard Beyond Tomorrow
Schools and Education

Direction Statement:

Tigard area residents have access to good quality public and private schools. Residents of our community, whether or not they have children in the school system, understand the importance of education and how they can help promote education of our community. The public schools have stable funding through state and local funding options. Curriculum and extra-curricular programs are important and are well supported through volunteers, local funding, and increased partnerships with business and government. New development assists in paying for new education infrastructure required by growth in the community. Public schools and governmental entities in our community actively partner in day-to-day operations and other costs to facilitate the most efficient delivery of services.

2001 Progress Summary:

The Tigard Community's Youth Forum convened in February and met almost monthly to address the needs for providing more activities and programs for Tigard's youth. A white paper was prepared that summarizes current programs and activities available to youth and the challenges to expanding those programs. This is available on the City's website (www.ci.tigard.or.us). The focus in the coming year will be on expanding those opportunities through community – wide partnerships. Student and adult volunteers continue to serve as a complement to School District personnel especially in reading and mentoring programs. The City's Young Adult Librarian meets monthly with the District's media specialists to ensure library programs and resources compliment district curriculum. The Tigard-Tualatin School District is developing a proposal to go to the voters in May of 2002 for approval of a bond levy that would fund improvements to serve the District for at least 10 years.

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#1) Schools, City government, and other service providers successfully work together to provide a community-based recreation activity program for young people	1) Identify community resources for supporting/ providing recreation and activity programs for young people	➢ Explore the possibility of local business sponsorship of clubs, athletic and recreational activities at all school levels ➢ Increase volunteer participation in leading club, athletic and recreation programs in middle schools, high schools and elementary schools ➢ ~~Tie existing youth athletic programs more directly to schools with support of new Business partnerships~~ ➢ Recruit senior citizens and other community volunteers to coordinate and teach hobby, activity and recreation classes	Ongoing Ongoing Ongoing	The Tigard Community's Youth Forum has been meeting since February 2001. Membership is comprised of educators, business leaders, members of the faith community, service club members, city councilors, city staff, and students. A white paper was prepared that summarizes activities and programs currently available to youth in the community and the challenges of expanding those programs. Local service clubs such as Rotary participated with youth in volunteer and service activities. Local businesses support school athletics by assisting with fund raising efforts.
	2) Investigate ~~private~~ funding resources to provide after-school sports and activity programs for students.	➢ ~~Investigate the funding relationship between schools and cities in other local park and recreation districts~~ ➢ Establish a true Community Schools Program (offering after-school education, interest classes for adults as well as young people).	~~2001~~ 2002	The Tigard Community's Youth Forum heard a presentation from the Boys and Girls Clubs of Portland and has determined their involvement in Tigard is at least three years out. The group is now focused on a pilot program to expand the after school program at Twality Middle School.
	3) Pursue existing resources available through the City and the School District to provide programs.	➢ Investigate an intergovernmental agreement between the Tigard-Tualatin School District and the cities of Tigard and Tualatin to develop/reconstruct school properties used for recreation.	~~2001~~ 2002	The "Art After Hours" program has expanded offerings at Tigard High School. The City has increased workshops for young adults. Examples include writing and animation workshops.

Youth Picture Provided
by Tigard-Tualatin School District

Schools and Education - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#2) Educational opportunities for students in Tigard-Tualatin Schools will be maximized	1) Use volunteers to support teachers, provide additional learning opportunities for students.	➢ Increase volunteerism in schools to help teachers and coordinate activities ➢ ~~Seek funding for~~ Support volunteer coordinators at each school for ~~recruitment,~~ training and ~~placement~~ coordination of volunteers. ➢ Use older students to work with young students ➢ ~~Coops – parent required~~ Encourage parents to be involved with a definite time frame commitment ➢ Coordinate recruitment, training and support for all community volunteers ➢ Explore charter school options.	Ongoing Ongoing Ongoing ~~2001~~ 2002 – Ongoing Ongoing 2002	Volunteerism in the SMART and OASIS programs to help children learn to read continues. Members of the community continue to volunteer for the Lunch Buddy Program serving as mentors to elementary school students. Student LINK leaders at Tigard High and WEB leaders in the middle schools continue to mentor incoming 9th and 6th graders respectively. High school students continue to volunteer in the Tigard Library Homework Center and middle school students continue to read with elementary students on "late start" days.
	2) Maximize the use of district facilities.	➢ Consider using school facilities on extended day schedule to offer enrichment and remedial programs	Ongoing	The City of Tigard uses school facilities for library programs. The extended day program for elementary and middle school students to help them improve academic achievement is completing its' second year. People of all ages participate in the "Art After Hours" program held in school facilities. Plans are underway to expand after school offerings at Twality Middle School in January, 2002 as a pilot program and have activities for students until 5:45 PM.
	3) Partner with community resources to address student needs to ensure scholastic success.	➢ Encourage community involvement and support in the Caring Community effort to provide assistance to students in need of outside resources to address barriers to scholastic success. ➢ Through a variety of formats, communicate opportunities to assist students in need to all segments of the community.	~~2001~~ 2002 - Ongoing Ongoing	The Tigard – Tualatin School District is partnering with Washington County in the "Take the Time" program which looks at the assets of youth and encourages youth, parents, the schools, and community to find ways to build-up the youth. The school district conducted a survey of 6th, 8th, and 10th graders to find out what are the students concerns. The survey results will be used to determine what resources students need to access to remove obstacles to scholastic success.
	4) Actively pursue mentorship opportunities with businesses and colleges.	➢ Identify and contact area colleges with internship programs that can provide unpaid or low cost resources to staff mentorship programs. ➢ Pursue opportunities to speak to local businesses and business groups about mentorship opportunities.	~~2001~~ 2002 ~~2001~~ 2002	Local colleges have been contacted about providing interns for the pilot expanded after school program that will be offered at Twality in January. In addition, members of the Tigard Community's Youth Forum, service clubs, businesses, and community members will also be provided with opportunities to participate in the program.
#3) Schools and city government effectively work together to maximize efficiencies and develop alternative support options	1) Examine the potential for city government and the school district to provide complementary programs and services.	➢ Actively work with the City's young adult librarian to ensure library programs and resources complement district curriculum. ➢ City creates summer jobs for 2 at risk high school students ➢ Develop paid intern positions for vocational training within the City and community	~~2001~~ 2002 2002 ~~2002~~ 2002	The City's Young Adult Librarian meets monthly with School District media specialists to coordinate library programs and resources with district curriculum. The District still sees a need for student internships in the fields of health, engineering, and natural resources. Students in the CE2 program are linked into work opportunities with the City and other businesses. These options still could benefit from more publicity throughout the school.

Youth Picture Provided
by Tigard-Tualatin School District

Schools and Education - continued

GOAL	STRATEGY	ACTION PLANS	TIMELINES	PROGRESS DETAILS
#4) Government policies will permit the Tigard - Tualatin School District to prepare for growth and maximize the quality of services it provides students	1) Support policy changes that will promote the District's ability to provide adequate school facilities	➢ Through legislation, impose a development tax on all new construction (residential and commercial) for schools ➢ Provide tax incentive for land donated to schools ➢ Improve cooperation between government agencies, schools, developers, and planners ➢ Legislation should permit development moratoriums until all school infrastructure issues are resolved	Within ~~2~~ year~~s~~ 2 years Ongoing 4 years	Cooperation between the City and the Tigard-Tualatin school district continues to improve. School District personnel and Board members serve on the Tigard Beyond Tomorrow Vision Task Force and the Tigard Community's Youth Forum. A city elected official serves on the School District's Long-Range Strategies Task Force. In addition, the City and School District are looking at ways to share facility use and maintenance.
The Schools and Education Action Committee suggest that the Vision Task Force consider adding a Goal that speaks to life-long learning which is one of the elements listed in the community's overall vision statement.	2) School officials will create a long range plan to address future growth.	➢ Explore the possibility of constructing two-story schools in the future ➢ Continue to include land acquisition in future bond elections; create a 5 to 20 year plan for growth and acquire properties sufficient for projected enrollment ➢ Consider smaller schools that create an environment more conducive to student retention	Within ~~24~~ 12 months Within ~~24~~ 12 months Within ~~24~~ 12 months	The School District is developing a proposal to go to the voters in May 2002 for approval of a bond levy that would fund remodeling, new construction projects, and land acquisition throughout the District. If approved, the planned improvements would serve the District for at least 10 years.
#5 School districts ensure effective two-way communication to the entire community by regularly providing information about school-related issues.		➢ Develop effective ways to share information with the general citizenry about school programs and successes using a wide variety of formats ➢ Promote volunteer opportunities inside and outside the classroom ➢ Pursue opportunities for district involvement with the Chamber of Commerce and service clubs to promote awareness of District programs, needs, volunteer opportunities and student successes	~~2001~~ 2002 Ongoing Ongoing	The School District's Long-Range Task Force gave a presentation to the community that was aired over cable television in November. In addition, District personnel are involved with local service clubs and speak regularly about volunteer opportunities and student successes. The District is sharing staff/parent newsletters with City staff in an effort to provide more information to the general citizenry utilizing the City's newsletter, the *Cityscape*, updates on cable television, or email communications with community connectors.

QUESTIONS OR COMMENTS? Please contact the following staff person: Susan Stark Haydon, Tigard/Tualatin School District, 503-431-4000 e-mail sstarkhaydon@ttsd.K12.or.us

Youth Picture Provided
by Tigard-Tualatin School District

Tigard Beyond Tomorrow
Transportation and Traffic

Direction Statement:

Tigard takes a proactive role in regional transportation planning. Funding sources are diverse, include regional resources and are adequate to build and maintain our transportation system. Each type of street safely handles the traffic it is designed to serve. Local traffic is served by a well-connected street network that minimizes traffic impacts on neighborhoods. Tigard's arterials and major collector streets accommodate through-traffic reducing the impact of regional traffic on local neighborhoods. Alternative transportation methods are affordable and available. Use of alternative transportation is encouraged.

2001 Progress Summary:

Progress was made towards achieving all three goals. The draft TSP (Transportation System Plan) was completed in February 2000, approved by Planning Commission in February 2001, and is scheduled for Council adoption in January 2002. The Gaarde Street Improvements Phase 1 extending Gaarde Street from Quail Hollow-West to Walnut Street was completed in March 2001. City Council appointed a Transportation Financing Strategies Task Force to evaluate alternative funding sources for corrective and preventative maintenance, and for reconstruction and widening of collector streets to meet current and future traffic demands. A new funding source for street maintenance (Street Maintenance Fee) is now being evaluated for possible future implementation. The pavement overlay and slurry seal projects implemented during the summer of 2001 should provide for better traffic flow through the improved areas. The Pavement Management System software is being actively used in planning the annual preventive and corrective maintenance on the City streets. The Speed Hump Program has been incorporated into a more comprehensive Traffic Calming Program. Speed humps and other traffic calming devices have been installed by the City's street crews on several streets as part of this program to reduce actual speed on neighborhood streets while encouraging through traffic to use major collectors and arterials. In addition, the Capital Improvement Program formulation process was initiated in November 2001 to provide a list of prioritized projects that can be considered for implementation as part of the budget process during the first half of calendar year 2002.

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
#1) Improve traffic safety	1) Discourage through-traffic on local streets	➢ Develop Comprehensive Traffic Calming Program - yearly implementation ➢ Implement Traffic Calming Program ➢ Enforce posted speed ➢ Review possibility of mixed use areas near residential neighborhoods	~~9/01~~ 2/02 Annually Continuous Periodic CDC review	➢ Plan still under development. ➢ Traffic studies are continuing. In addition to speed humps, other traffic calming strategies are being incorporated including temporary traffic circles and lane narrowing. Speed humps continue to be the device favored by residents. ➢ The Police Department is continuing its emphasis on traffic enforcement. The Police Department is still evaluating the potential use of photo red light and photo radar. No implementation planned to date. ➢ Revised CDC includes mixed-use employment area in the Tigard Triangle. The Washington Square Regional Center Plan also includes mixed-use zones. The Implementation Plan is scheduled for Council action in early 2002. Measure 7 could have an impact on any future rezoning. However, the possible implementation of Measure 7 is being held up in the courts.
	2) Encourage through-traffic on major collectors and arterials	➢ Widening and improvements of major collectors and arterials ➢ Identify and promote use of through routes ➢ Examine and implement ways to maximize use of existing lanes ➢ Accelerate removal of vehicles after minor accidents	CIP process – Annual Ongoing Ongoing Ongoing	➢ Gaarde Street Improvements Phase 1 from Quail Hollow-West to Walnut Street began construction in late July 2000 and was completed in February 2001. ➢ Design and land acquisition for Gaarde Street Improvements Phase 2 from Highway 99W to 121st Avenue is currently in progress. Project construction is expected to begin in the spring of 2002. ➢ The Transportation Financing Strategies Task Force was formed by City Council to determine funding strategies for corrective and preventative maintenance and expansion of the collector system to meet current and future traffic demands. The Task Force recommended a Street Maintenance Fee as a possible new source for street maintenance. Council directed that a study be performed on the feasibility of implementing a fee. The study is ongoing and will be brought back to Council for discussion and direction in early 2002. ➢ The draft Transportation System Plan (TSP) is still in the public process for adoption. Adoption of the TSP has been scheduled for the January 8, 2002 Council meeting.

Gaarde Street Phase 1
after signalization done

Gaarde Street Phase 2
planned to improve to 3-lanes ini early 2002

Transportation and Traffic - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
	3) Reduce actual speed on neighborhood streets	➢ Strict enforcement of posted speed limits ➢ Traffic calming measures ➢ Implement traffic control measures where appropriate ➢ Controlled access to collector roads	Continuous Ongoing As warranted for safety During App. Review	➢ Additional speed humps have been installed in various streets Citywide during the past year. These speed humps typically reduce the actual speeds by 4 to 6 mph. ➢ Traffic volume and speed studies were continued during the year to identify problem areas and determine what traffic control or calming measures may be required. ➢ The Development Code prohibits direct access from residential lots to collectors. The access to residential subdivisions will be determined during the development review process in accordance with the code.
#2) Improve traffic flow	1) Develop a program to implement the Transportation System Plan	➢ Review all existing streets to be connected for feasibility of connection ➢ Prioritize street connections in order of importance ➢ Develop funding strategy for City-funded street connections ➢ Where possible, preserve and protect existing natural areas ➢ Design transportation facilities to include natural features and promote connectivity to open space, greenways, and natural area access	Ongoing 2001/02 2001-02 Ongoing Ongoing	➢ The draft TSP makes recommendations for connectivity and prioritizes those projects on both collectors and local streets. One new connector that has been designed and constructed is the Gaarde Street Extension from Quail Hollow-West to Walnut Street. The new Gaarde Street Extension provides the final link in forming a continuous east-west connection through Tigard to Beaverton. ➢ The Transportation Financing Strategies Task Force is currently examining alternative funding sources for financing the needed improvements.
	2) Look for additional points of connectivity	➢ Establish ROW Acquisition Program to set aside corridor connection points ➢ Coordinate with other jurisdictions for connection points ➢ Communicate the need for local street connections to reduce the traffic impact on existing neighborhoods	ID after TSP adoption Ongoing Continuous	➢ The TSP Study has identified several new routes that (if constructed) would draw traffic from Hall and 99W. Negotiations are ongoing with a property owner to acquire land to locate a proposed new library and to construct one of those new routes. ➢ Land acquisition for the Gaarde Street segment from Highway 99W to 121st Avenue is actively ongoing. ➢ Beaverton is still exploring options for funding the Murray Boulevard Extension from Scholls Ferry Road to Barrows.
	3) Design and implementation of traffic flow enhancement	➢ Synchronization of state, county and city traffic signals ➢ Coordination with other jurisdictions for continuity of enhanced flow ➢ Emphasis on street striping ➢ Increased street lighting throughout City streets ➢ Emphasize maintenance of areas where clear sight distance is necessary ➢ Improved signage on freeways and arterials ➢ Encourage construction of new toll roads as opportunities arise	Continuous Continuous Ongoing Each FY Each FY Ongoing Continuous	➢ Permanent striping of segments of Walnut Street is included in the striping program for this fiscal year. ➢ Streetlights are part of every new project that involves expansion of streets to ultimate development. The extension of Gaarde Street to Walnut and the MSTIP 3 project to improve Walnut Street from 121st Avenue to 135th Avenue both include new streetlight installations as part of the projects. Gaarde Street Improvements Phase 2 will also include new streetlight installations.

121st Avenue and Walnut Street
Phase 1 of a three-phase project to improve Walnut Street from 121st Avenue to 135th Avenue.

Transportation and Traffic - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
#3) Alternative modes of transportation are available and use is maximized	1) Identify alternate transportation modes	➢ Enhance off-street bikepath/pedestrian walkway connectivity ~~➢ Determine optimum route for alternate modes~~ ➢ Explore rail commute options	With each CIP annually ~~Partially completed with~~ Incorporated into the TSP Ongoing with Commuter Rail Project	➢ A new pathway alongside Fanno Creek from Tiedeman Avenue through Woodward Park to Johnson Street was recently completed adding another segment in the effort to provide north-south connectivity through Tigard. ➢ Optimum routes for alternate modes are incorporated in the TSP. ➢ Commuter rail is still being pursued. Funding from State and Federal sources are not yet assured.
	2) Encourage uses of alternate modes	➢ Endorsement of increased gas tax and registration fees and provide data to support increases ➢ Encourage establishment/construction of HOV lanes on state highways ➢ Support ~~R~~reduced fares for transit users ➢ Educational campaign to increase awareness of alternate modes	Ongoing Continuous Continuous Continuous	➢ Current information is available for use in support a future street maintenance fee, or for any future efforts to increase the gas tax. ➢ Efforts have been and continue to be made in encouraging use of alternate modes of travel. Publication and participation in the Westside Transportation Alliance's "carfree" program, is one such campaign. The City's telecommuting program for its employees is continuing.
	3) Encourage development of alternate modes	➢ Coordinate with other jurisdictions for continuity of various modes ➢ Participate in regional efforts to develop & promote use of alternate modes ➢ Require development of bikepath/pedestrian walkway connectivity ➢ Review & provide connections in existing areas ➢ Focus efforts on improvements to provide connectivity for pedestrian and bicycle travel	Ongoing Continuous Continuous Continuous Continuous	➢ The draft TSP includes sidewalk and bicycle master plans for adoption by the City. Bikepath/pedestrian walkway connectivity will be a priority each year in the CIP process. In addition, bike lanes and sidewalks are integral parts of the projects included in each of the major street projects authorized through the annual CIP process. A proposed bond issue to fund some of these major street improvements was presented to the voters at the November 2000 election. Although the bond issue did not pass, the projects identified in that proposed bond are still greatly needed and will be constructed as funds become available in the future. The tentative plan is to proceed with a bond issue for transportation-related projects in 2004. The completion of these projects would greatly enhance pedestrian and bicycle travel throughout the City. ➢ The City is currently exploring the feasibility of initiating intra-city transit to provide east-west connections along key transportation routes.
#4) Identify and develop funding resources	1) Examine current and possible new sources of funding	➢ Examine current funding sources and possible new sources of funding ➢ Present recommendations to City Council for discussion	1/01 to 6/0~~1~~2 8/01, 2/02, and 12/02	➢ The Transportation Financing Strategies Task Force appointed by City Council is examining alternative funding sources for both maintenance and major improvements to the street collector system. The initial report to Council on August 28, 2001 recommended initiation of a Street Maintenance Fee study for possible implementation. The study is in progress and will be completed in early 2002. It will be brought to Council for discussion and direction.
	2) Implement recommendations	➢ Implement short-term measures ➢ Initiate long-term measures	~~9/01 to 11/02~~ 2/02 to 12/02 2003-06	➢ The short-term approach would be to use available TIF and State Gas Tax funds for improvements and add a new funding source (Street Maintenance Fee) by next fiscal year. ➢ The long-term approach would include a potential bond issue in 2004 for design and construction of key projects within the City. In addition, other funding sources will be evaluated for development and implementation during the next few years to fund transportation improvements during the next 20 years.

QUESTIONS OR COMMENTS? Please contact the following staff person: Gus Duenas, City Engineer, 503-639-4171 ext. 378 e-mail: gus@ci.tigard.or.us

Tigard Beyond Tomorrow
Urban & Public Services

Direction Statement:

Basic Urban Services (such as access to parks, recreational opportunities and libraries) are provided to Tigard citizens through property taxes and fees for service. Citizens are charged for enhanced services on a cost-for-service basis. Expansion of the infrastructure necessary to serve growth is paid for by growth. In an effort to facilitate the most efficient delivery of basic urban services, partnerships with businesses, special interest groups, and other communities are encouraged. Citizens are educated about basic urban services, and how to access and preserve the services.

Current library facilities are too crowded to keep up with user needs and requests

2001 Progress Summary

The Library continues to implement its Long Range Strategic Plan. Usage of the Library and service requests from patrons is increasing each month. Programming and collection needs are severely impacted by space restrictions. The current Library site does not allow for adequate expansion. For these reasons City Council has authorized a bond measure be presented to the public at the 5/21/02 election to fund the building of a new library which will be 2.5 times larger than the current building to keep pace with growing demand. This will allow programming & patron needs to be met for the next 20 years.

Greenways and open space have also been a major focus this year. Many informational meetings have been held to discuss wetland issues and gather citizen observations and input. Cook Park, Fanno Creek Park and Woodard Park have seen major improvements. Joint work with the City, Tigard-Tualatin School District, and private property owners continue to utilize public and private facilities for parks and recreation opportunities.

Water and storm water issues continue to move forward. The City has drilled a new well to replace a well originally drilled in 1947. Use of this well will result in a savings of about $100,000 a year for drinking water and will pay for itself within 10 years. Storm water quality ponds in neighborhoods have also received face-lifts to make them neighborhood amenities as well as create water fowl habitats for residents to enjoy.

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
LIBRARY #1) Library will have a stable funding base for the provision of basic services	1) Provide additional library services through users fees for selected "enhanced" services.	➢ Annual review and update of the Library's Long Range Strategic Plan 5-Year Plan will occur	Ongoing	Annual review and updates occurred and plan-identified activities were successfully implemented. Following are two of the target areas of focus in the Library's Strategic Plan: • General Information – to meet the needs for info and answers to questions on a broad array of topics related to work, school and personal life. • Information Literacy – to help address the need for skills related to finding, evaluating and using information effectively.
 Proposed new Library	2) Identify entrepreneurial means of generating support for library services	➢ Create task force to review info, ID companies within service area as potential partners and explore entrepreneurial concepts ➢ Public education regarding partnerships to involve non-profit/service organizations ➢ Explore concept of "sponsored" collections ➢ Develop proposal for minimum of two innovative funding options	Strategy on hold until more Library space is available.	On hold until there is a new Library with the necessary space to implement this strategy.
Views from entrance & greenway 	3) ~~Seek~~ Library Foundation takes lead in developing alternatives to ~~current~~ tax base funding mechanism	➢ Continue developing & adding partnerships until Library is at 3% ~~10%~~ of support ~~by 2003~~ ~~➢ Develop library foundation~~ ➢ Review/evaluate models of library support	~~2/01 – 8/01~~ Ongoing ~~Spring 2001~~Completed ~~2/01 – 12/01~~ Ongoing	➢ Library Foundation established. ➢ LSTA Grant was awarded to the Library to develop high school & middle school Hispanic technology, special software, and other media – will receive monies during 2002 ➢ "Live at the Library" grant received. Funds author visits and other outreach programs for the community.

Urban & Public Services - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
#2) A wide array of opportunities for life-long learning are available in a variety of formats and used by the community.	1) Expand overall use of the library's basic computer resources.	➢ ~~Library will offer at least one class per month in basic computer skills~~ ➢ ~~Library will offer at least one class per month to teach patrons how to use the Electronic Resources Center~~ ➢ Library will provide links on its web site to free online tutorials for basic computer skills	~~June, 2001~~ ~~June, 2001~~ July 2002 – June, 2003	➢ Basic computer skill building classes will be offered on an ongoing basis. Expand computer classes offerings Spring 2002. These will continue but not be part of the Vision action plan in the future.
	2) Ask for patron suggestions regarding their interests in Library materials and programs.	➢ Establish patron advisory groups for specific genres. ➢ ~~Develop and distribute feedback forms after select programs.~~ ➢ ~~Create patron suggestion forms to solicit program ideas and make forms readily accessible.~~ ➢ Survey other libraries in the area to learn more about their programming and publicity efforts.	Beginning July, 200~~1~~2 ~~Beginning July, 2001~~ Ongoing ~~2002~~ Ongoing September, 2003	➢ Seek patron input for collection development and programs offered – Spring 2002 ➢ Being done now and will continue. ➢ Being done now and will continue. In 2001, collection changes due to patron feedback have been: rental book collection is back, expanded Spanish books & videos, DVD collection has increased, and book are now available on CD! ➢ N/A
	~~3) Explore possibility of remaining open additional hours.~~	➢ ~~Develop strategies for gathering statistics to measure the public's desire for additional open hours.~~ ➢ ~~Determine financial impact of increased hours of operation.~~	~~June, 2001~~ Done ~~June, 2001~~ Done	➢ Expanded hours in June of 2001 by keeping Library open Friday evenings (4 hours more per week). An average of 200 people use the Library each Friday evening. ➢ Public surveys will continue to be used to monitor needs of community evaluate services and hours offered by the Library.
#3) Adequate facilities are available for efficient delivery of life-long learning programs and services for all ages.	~~1) Form construction committee to explore feasibility of new library space.~~	➢ ~~Construction Committee reviews possible sites for new library space~~ ➢ ~~Construction Committee recommends to City Council short list of possible sites~~ ➢ ~~Educate citizens on the siting process and the pros and cons of various locations~~	~~Spring, 2000~~ Done ~~Spring,. 2001~~ Done ~~Summer, 2001~~ Done	➢ Site recommended to City Council for proposed new library – August 2001. Purchase negotiations occurring at this writing. ➢ Construction Committee has begun to give community presentations and seek community input about the proposed new library.
	~~2) Construction Committee reviews Needs Analysis & Programming Reports~~	➢ ~~Working with the architects the Committee prepares different possible models of Library Services.~~ ➢ ~~Collaboration between Committee and consultants resulting in a presentation to City Council.~~	~~Spring,. 2001~~ Done ~~Spring,. 2001~~ Done	➢ Needs Analysis completed and building program report for the new library completed.
	1) Successful passage of a bond measure for construction of new library.	➢ Develop bond ballot measure language for Council approval. ➢ Provide information to citizens/voters about library construction plan. ➢ Hold bond measure election.	Late 2001 Ongoing 2002	➢ N/A ➢ Information developed and shared through City's website, community presentations, and display of the architectural model. ➢ Factual information will be shared in 2002 up to election date.

Urban & Public Services - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
PARKS & ~~RECREATION~~ GREENWAYS ~~#1) Create a special parks and recreation district with the City of Tigard spearheading the process and maintaining membership for its citizens.~~	~~1) Create a task force regarding development of a park and recreation district~~	➢ ~~Appoint task force~~ ➢ ~~Investigate utilization of existing school/park facilities and properties~~ ➢ ~~Investigate a partnership to maintain existing facilities~~ ➢ ~~Address grants and fees~~ ➢ ~~Co-op with existing leagues and groups~~ ➢ ~~Develop and utilize existing school/park facilities and properties~~ ➢ ~~Create a partnership to maintain existing facilities~~ ➢ ~~Address funding issues – bond/levy, prop taxes, private support, grants, fees~~ ➢ ~~Co-op with existing leagues and groups~~ ➢ ~~Include Sr. Center & Seniors as an essential part of the District's programs~~	~~Determine status of Task Force future consideration for a Park & Recreation District – January 2001 – June 2001~~	The citizen-based Vision Task Force focus modified the focus for parks by adding greenways to this goal and creating a separate goal for recreation. See recreation update on next page under the Recreation Goal.
	~~2) A wide range of leisure and recreation opportunities are available for the Tigard community.~~	➢ ~~Allow current providers opportunities to continue existing services (*i.e., PCC, Senior Center and City Library) and work with the special park & recreation task force for future parks for service. The need for more emphasis on school education program and communication with the school needs to be addressed~~	~~Awaiting meeting – January 2001~~	See recreation update on next page under the Recreation Goal.
#~~2~~1) The City educates and supports citizen efforts to understand the importance of floodplains and how the areas are managed and protected.	1) Adopt educational and presentation program for wetlands and open spaces	➢ Develop community wide partnership to educate citizens about need to protect and preserve wetlands and open spaces ➢ Prepare list of possible land acquisition sites available inside and outside City ➢ Reclaim what lands we already have ➢ Address funding issues ➢ Implement school educational program	~~1/98 – 1/01~~ Ongoing ~~10/97 – 1/00~~ Ongoing ~~1/00 – 12/01~~ Ongoing ~~10/97 – 1/01~~ Ongoing ~~1/98 – 1/01~~ Ongoing	The City keeps an on going list of possible land acquisitions & funding sources and updates staff and Council periodically. Staff goes out into the community at CIT and neighborhood meetings to discuss parks, open space and wetland issues. Staff also utilizes the City's newsletter, website and CIT program to continue education efforts.

Urban & Public Services - continued

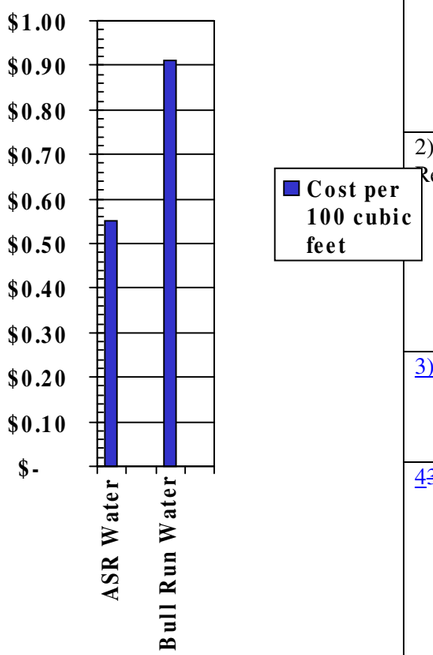
GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
#2) Open space & greenway areas are preserved and protected. NEWLY COMPLETED COOK PARK BUTTERFLY WALK	1) Acquire and develop parkland	➢ Continue the implementation and funding for the Cook Park Expansion Project Phase II Construction. ➢ Develop Bonita Park Phase I with CDBG Grant. ➢ Seek grants to purchase Senn and Swan properties. ➢ Seek grant to purchase Fanno Creek Park (Grant to Main Street segment) ➢ Continue to look into Bull Mtn area for land acquisition ➢ Build shelter at Woodard Park ➢ Continue tree planting plan ➢ Conduct at least 4 major volunteer projects ➢ ~~Complete the~~ Complete implementation of the Summerlake Master Plan ➢ Phase implementation of Park Master Plan	~~Phase I of the wetland mitigation – completed~~ ~~Phase II bid of parking lot – February 2001~~ Phase II – construction by ~~September 2001~~ October 2002 ~~Reauthorize consultant by August 2001~~ Ongoing for rest of action plans	Completed Cook Park Phase I Complete Phase II by October 31, 2002 Pursuing Senn and Swan property Completed a Fanno Creek Park Enhancement Plan N/A Completed Woodard Park trail & received grant to build shelter City pursuing Tree City USA designation Conducted numerous volunteer efforts Complete Summerlake Master Plan by 3-02 Will build tot lot and shelter - Summer 2002 Created an off leash area for dogs on Ash Street Currently negotiating an off leash dog park on private property to be developed by June 2002
RECREATION #1) Create a special parks and recreation district with the City of Tigard spearheading the process and providing opportunities ~~maintaining membership~~ for the Tigard community ~~its citizens~~ Note: This goal was moved from the old Parks & Recreation Goal area.	1) Create a special parks and recreation district with the City of Tigard spearheading the process and providing opportunities for the Tigard community.	~~➢ Appoint task force~~ ➢ Investigate utilization of existing school/park facilities and properties ~~➢ Investigate a partnership to maintain existing facilities~~ ➢ Address grants and fees ➢ Co-op with existing leagues and groups ➢ Develop and utilize existing school/park facilities and properties ~~➢ Create a partnership to maintain existing facilities~~ ~~➢ Address funding issues - bond/levy, prop taxes, private support, grants, fees~~ ~~➢ Co-op with existing leagues and groups~~ ➢ ~~Include Sr. Center & Seniors as an essential part of the District's programs~~	Ongoing	Currently studying fees and charges for rentals of park facilities. Comparative matrix prepared in December 2001. Study will be complete by February 2002
#2) A wide range of leisure and recreation opportunities are available for the Tigard community. Note: This goal was moved from the old Parks & Recreation Goal area.	1) Develop partnerships with current providers to provide opportunities for recreation	➢ Allow current providers opportunities to continue existing services (i.e., PCC, Senior Center and City Library). ~~and work with the special park & recreation task force for future parks for service. The need for more emphasis on school education program and communication with the school needs to be addressed~~	Ongoing	Opportunities continue to exist. Worked with a citizen group interested in Dog Parks Mayor coordinated a Community-wide Youth Forum and Skate Park Committee Continued to investigate school/city joint use opportunities.

Play equipment at Cook Park

Nature paths

Ball fields

Urban & Public Services - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
WATER & STORMWATER #1) Actively participate in regional development of drinking water sources and adequate, innovative funding mechanisms to develop those sources for Tigard users while exploring local options for water reuse and groundwater source.  	1) Investigate developing partnership or contracts with other jurisdictions to develop a long-term source of water.	➢ ~~Inform water users of progress~~ ➢ Continue to pursue partnerships and water source development on two fronts – the Joint Water Commission and the newly developing Regional Drinking Water Agency ➢ ~~Work with South Fork Water Board, Lake Oswego & North Clackamas County Water Commission to develop an intergovernmental agreement for the creation of a water supply entity.~~ ➢ Continue negotiating with the City of Portland along with other entities, a new Wholesale Water Agreement-regional water organization	Ongoing through 2002 ~~IGA by June 2001~~ ~~Draft contract ready for signatures by 6/2001~~ ongoing	The City Council and Intergovernmental Water Board (Unincorporated area of Washington County (TWD), King City and Durham (are examining options to provide the service area with an adequate supply of drinking water. Currently the two viable options are the Joint Water Commission (Hillsboro, Beaverton, Forest Grove and TVWD) and a Regional Drinking Water Agency.
	2) Develop a feasibility report of Aquifer Storage and Recovery (ASR) for the water service area.	➢ ~~Receive sealed proposals from qualified engineering firms~~ ~~➢ Phase I – feasibility study completed~~ ➢ Phase II – pilot testing completion under construction ➢ Phase III – full scale ASR implementation on line available for drinking water	~~6/2001~~ 5/2002 ~~6/2003~~ 11/2002	Phase 1 now completed, recommendation to continue with ASR at Canterbury site, Phase II underway and should be under construction and operational during summer of 2002. Phase III scheduled for 2006/07
	3) Build identified water capital improvements	➢ Target first five years of construction projects identified in the Water Distribution Hydraulic Study ($7.6 million) ➢ Develop funding for above	On going until Fiscal Year 2006/07	N/A
	4~~3~~) Conservation - Reuse - Alternatives	➢ Educate water users in conservation methods ➢ Explore alternative sources ➢ Develop ways to control access to water which would not allow growth to outgrow water supply ➢ Develop new, more aggressive conservation techniques, (i.e. Gresham rebates) ➢ Explore additional use of effluent water for irrigation	Ongoing ~~January 2002~~ Ongoing January 2002 Operational by June 2002	Tigard is a key player in the Regional Water Conservation Coalition participating in water wise landscaping workshops, conservation kits and other regional activities. Locally we have developed an Education and Outreach Program that includes working closely with the area schools and also monthly *Cityscape* articles along with water bill inserts in the summer.

Annual cost savings of ASR water
estimated to be $98,000 (based on 2001 dollars)

ASR – Well drilling rig on site
Well was ultimately drilled at a
depth of about 600 feet.
ASR well will pay for itself within 10 years.

#1 Well drilled in 1947 served Tigard residents
for 54 years. New ASR well will replace this well's
function.

Urban & Public Services - continued

GOAL	STRATEGY	ACTION PLAN	TIMELINES	PROGRESS DETAILS
#2) Stormwater runoff is effectively managed.	1) Develop a management plan for storm water facilities	➢ Complete Summerlake water quality plan and take to City Council	~~February 2001~~ Project on hold	City Council received plan and has been placed on hold pending State/Federal regulation mandates.
		~~➢ Implement the Merestone area wetland enhancement project~~	~~2001-2002~~	
		~~➢ Obtain written permission for property owners to flood their property~~	~~January, 2001~~ ~~March, 2002~~	Completed
		~~➢ Develop procedures for neighborhood maintenance terms~~	~~June, 2001~~ ~~July, 2001~~	Completed
		~~➢ Monitor water levels~~	~~2/7/2001~~	Concept was abandoned
		~~➢ Report back to Council~~		
		➢ Funds available for recommended alternatives	Sept 2002	On going
		➢ Develop education component for stormwater/quality enhancement efforts	June 2002	
		➢ Explore stormwater treatment techniques applicable to retrofit older neighbor-hoods	October 2002	The Utility Division continues to perform storm related progress at Clean Water Services standards.
		➢ Enhance existing stormwater quality ponds – make them neighborhood amenities (2 per year)	Ongoing	Storm water quality ponds in neighborhoods have also received face-lifts to make them neighborhood amenities as well as create water fowl habitats for residents to enjoy.

QUESTIONS OR COMMENTS? Please contact the following staff people:

LIBRARY — Margaret Barnes, Library Director, 503-639-4171 ext. 263 e-mail: margaret@ci.tigard.or.us

PARKS, RECREATION, WATER & STORMWATER — Ed Wegner, Public Works Director, 503-639-4171 ext. 396 e-mail: ed@ci.tigard.or.us

Picture of a neighborhood water quality pond off of Walnut and 135th Avenue

AGENDA ITEM # 7
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Update on the Tigard Public Library

PREPARED BY: Margaret Barnes DEPT HEAD OK MB CITY MGR OK

ISSUE BEFORE THE COUNCIL

Presentation about the growth in activities and services provided by the current Library. Update on the proposed new library for Tigard.

STAFF RECOMMENDATION

The staff recommendation is for the City Council to direct the Construction Committee to continue to raise public awareness about the proposed new library.

INFORMATION SUMMARY

This past year at the Library has been one of growth and activity. In addition, the Library has implemented several new programs and services, including expanded hours on Friday evenings. The Library continues to experience an increase in usage of services. Two examples of increased demand for service is in the annual circulation of items and the number of people attending programs.

In addition, to all this current activity, the New Tigard Library Construction Committee has spent the past twelve months planning for the future. They have developed a complete package that they presented as a recommendation to the City Council. This recommendation included a new library of approximately 47,000 square feet, a proposed site and a bond measure of $12.5 to $13 million for the proposed new library for the community of Tigard. On December 18, the Council unanimously approved the proposed $13 million bond measure which will be placed on the May 21, 2002 ballot. This amount would pay for land acquisition, the building design, construction and furnishing of a new library, parking, landscaping, and related street improvements and bond issuance costs.

At this time, staff is prepared to present to Council the year in review.

OTHER ALTERNATIVES CONSIDERED

None.

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Goal #3: Adequate facilities are available for efficient delivery of life-long learning programs and services for all ages.

ATTACHMENT LIST

Set of PowerPoint slides.

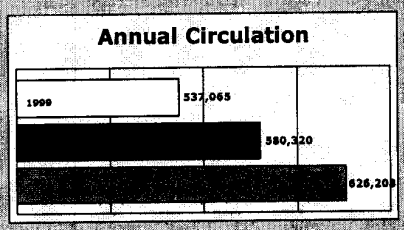
FISCAL NOTES

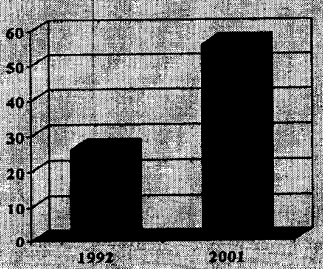
None.

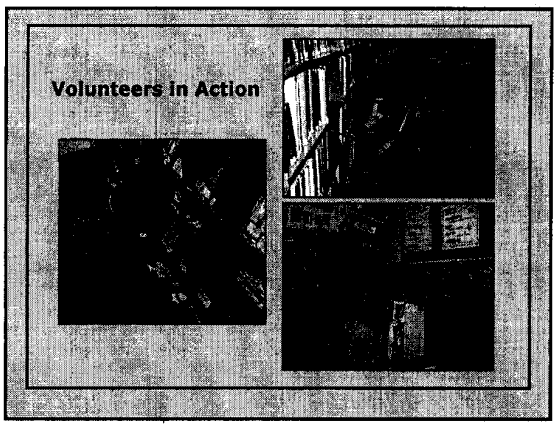
A library year in review...

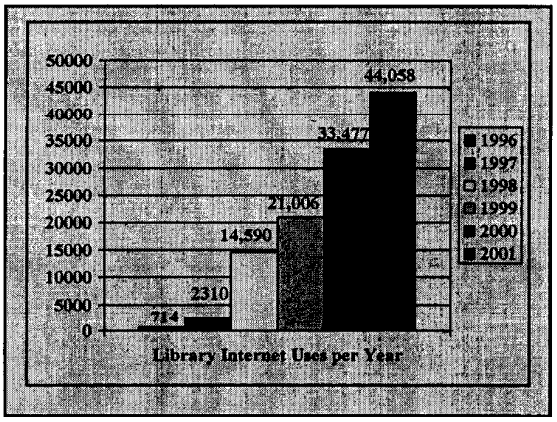
A brief celebration and recap of 2001 and a glimpse of the future

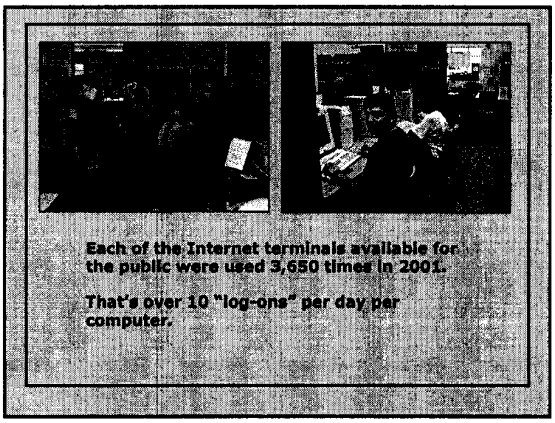
TIGARD PUBLIC LIBRARY
Serving the public since 1963
13125 SW Hall Blvd., Tigard, OR • 503-684-6537 • www.ci.tigard.or.us

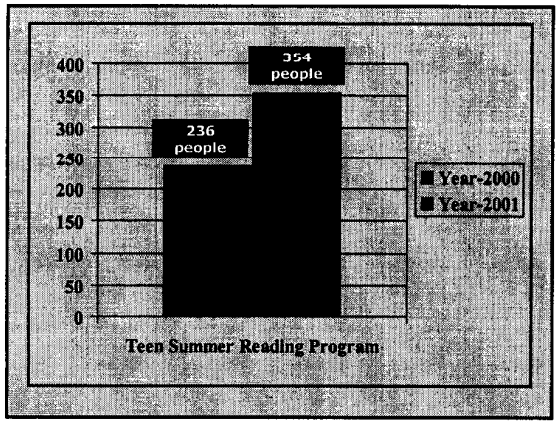


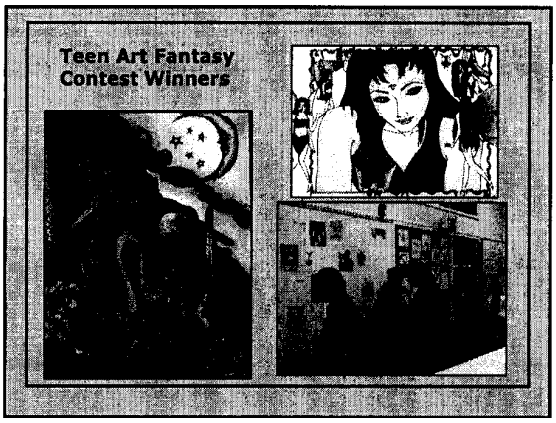


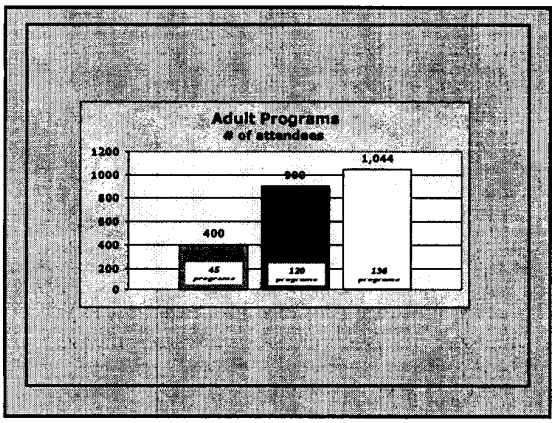

Volunteers in Action

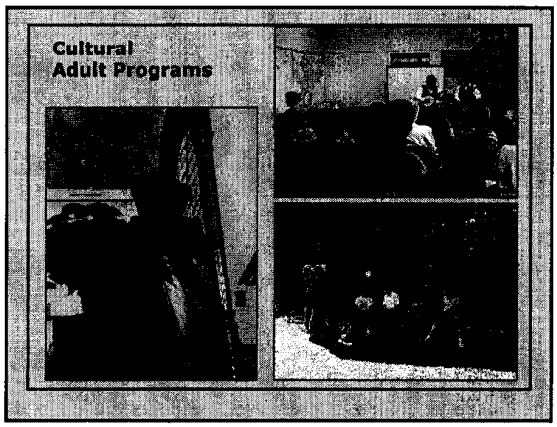

50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
714
2310
14,590
21,006
33,477
44,058
1996
1997
1998
1999
2000
2001
Library Internet Uses per Year

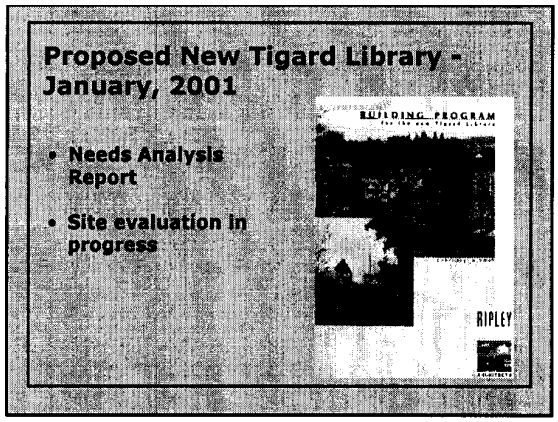

Each of the Internet terminals available for the public were used 3,650 times in 2001.
That's over 10 "log-ons" per day per computer.

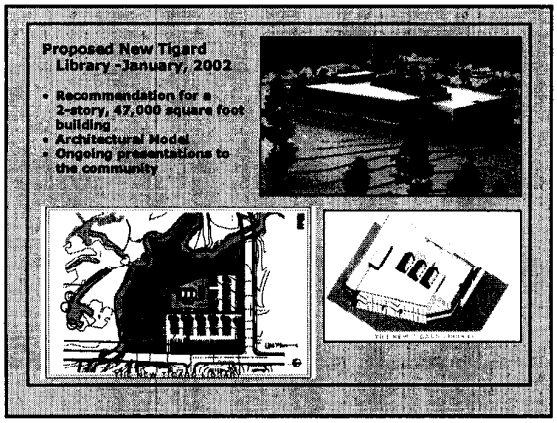

400
350
300
250
200
150
100
50
0
236 people
554 people
Year-2000
Year-2001
Teen Summer Reading Program


Teen Art Fantasy Contest Winners


Adult Programs
# of attendees
1200
1000
800
600
400
200
0
400
900
1,044
45
120
136

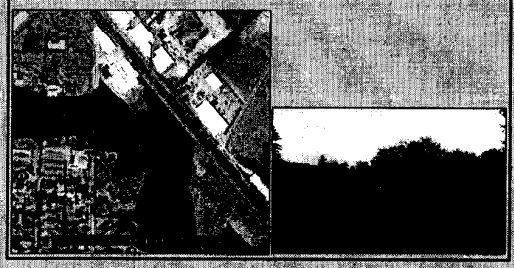

Cultural
Adult Programs


Proposed New Tigard Library - January, 2001
• Needs Analysis Report
• Site evaluation in progress
BUILDING PROGRAM
RIPLEY


Proposed New Tigard Library -January, 2002
• Recommendation for a 2-story, 47,000 square foot building
• Architectural Model
• Ongoing presentations to the community

Also in 2001...

- Conceptual designs for building layout.
- Cost estimates for construction and associated site work.
- Option to buy property at Hall and O'Mara.

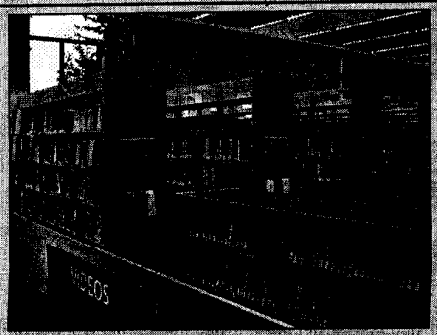


Possible Interior furnishings and finishes for Proposed New Tigard Library

Main Aisleway: Views of ceiling, carpet, natural and ambient lighting, tables and chairs.

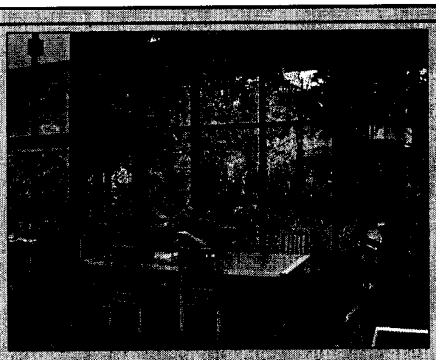
Detail of Lobby Artwork

Detail of carpet, tile and wood furnishings



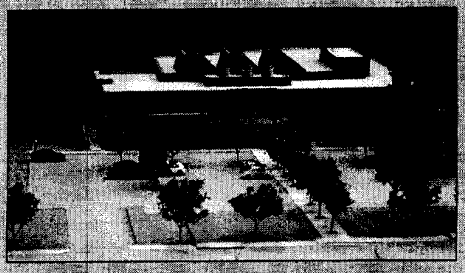
Detail of shelving and natural lighting

Information Desk with art work in background



Park-Like Natural Setting

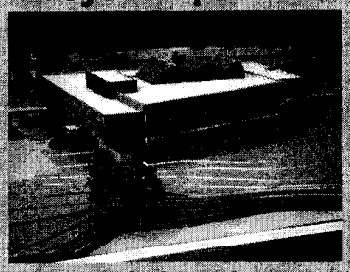
Front Entrance View



On December 18, 2001, City Council Approved:

- Bond Measure for $13 Million
- May 21, 2002 Ballot
- Construction of New Tigard Library

Project Updates



www.ci.tigard.or.us

So, if you haven't been in to the library in a while, come check out the possibilities.
There's something inside for everyone. Well, almost everyone.

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Zone Change Annexation (ZCA) 2001-00001 - Pacific Crest Annexation

PREPARED BY: Mathew Scheidegger DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Should the Tigard City Council annex the parcels of land as identified in Option 1, 2, 3 or 4?

STAFF RECOMMENDATION

Staff recommends that the Council adopt Option #4.

INFORMATION SUMMARY

The proposed Pacific Crest annexation consists of seven parcels equaling 28.6 acres. The parcels are within the City of Tigard's urban services area, and have recently attained preliminary approval for a 65-lot subdivision. As a condition of approval, the Pacific Crest Subdivision is required to annex into the City of Tigard, per current annexation policy. However, further review showed that the annexation request did not border the Tigard city limits. The problem was resolved by including the Bonneville Power Administration easement that abuts the Tigard city limits, creating a uniform boundary.

In addition, the Pacific Crest annexation would create a 2.0 acre island within the subdivision. Staff has attempted to contact the owner of this property to be included with the proposed annexation with no success. Therefore, staff is presenting Council with 4 ordinance options. The property is already zoned with the County R-7 zoning designation and the proper zoning is concurrent with the annexation according to Section 18.320.020.C of the Community Development Code. The County zone will automatically convert to the City R-7 zone upon annexation approval by Council.

Staff has notified all affected agencies and CIT members of the proposed annexation. There was no objection to the annexation by those who returned comments. Staff has reviewed the proposal for compliance with Metro Chapter 3.09, the Comprehensive Plan Policies, the Tigard Development Code, and the Oregon Revised Statutes. As indicated in the staff report to City Council, the proposed annexation meets the applicable standards

Option #1
Approve the annexation of (8) parcels of approximately 33.68 acres into the City of Tigard and create a 2.0 acre island described as WCTM 2S109DD, Tax Lot 2200. This includes the section of the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels.

Option #2
Approve the annexation of (9) parcels of approximately 35.68 acres into the City of Tigard through the adoption of a separate ordinance by means of a double-majority. This includes the 2.0 acre island.

Option #3
Approve the annexation of (8) parcels of approximately 38.5 acres into the City of Tigard through the adoption of a separate ordinance. This includes the section of the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels all the way to SW Barrows Road. This would create a 2.0 acre island described as WCTM 2S109DD, Tax Lot 2200 and additional islands to the east of the BPA easement along SW Fern Street but would provide one uniform boundary along the westerly boundary.

Option #4
Approve the annexation of (9) parcels of approximately 40.5 acres into the City of Tigard through the adoption of a separate ordinance. This includes the 2.0 acre island as well as the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels all the way to SW Barrows Road. This also would create islands to the east of the BPA boundary along SW Fern Street and the uniform westerly boundary. This would provide the most complete option.

OTHER ALTERNATIVES CONSIDERED

Denial of the request.

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Growth and Growth Management, Goal #2 – Urban services are provided to all citizens within Tigard's urban growth boundary and recipients of services pay their share.

ATTACHMENT LIST

Attachment 1 - Ordinance Option #1
Attachment 2 - Ordinance Option #2
Attachment 3 - Ordinance Option #3
Attachment 4 - Ordinance Option #4
Attachment 5 - Staff report to City Council.

FISCAL NOTES

The applicant is responsible for paying the Metro processing fee and has already paid the fees necessary to administer the application by planning staff.

CITY OF TIGARD, OREGON

Attachment 1
(Option #1)

ORDINANCE NO. 2002- _____

AN ORDINANCE ADOPTING FINDINGS AND CONCLUSIONS TO APPROVE AN ANNEXATION (ZCA) 2001-00001/PACIFIC CREST ANNEXATION AND WITHDRAWING PROPERTY FROM THE TIGARD WATER DISTRICT, WASHINGTON COUNTY ENHANCED SHERIFF'S PATROL DISTRICT, WASHINGTON COUNTY URBAN ROADS MAINTENANCE DISTRICT, WASHINGTON COUNTY STREET LIGHTING DISTRICT #1, CLEAN WATER SERVICES, AND THE WASHINGTON COUNTY VECTOR CONTROL DISTRICT.

WHEREAS, the City of Tigard is authorized by ORS 222.120(4)(B) and 222.170 to initiate an annexation upon receiving consent in writing from a majority of the electors registered in the territory proposed to be annexed and written consent from owners of more than half the land in the territory proposed to be annexed; and

WHEREAS, the City if Tigard is authorized by ORS 222.120(5) and 222.520 to withdraw properties which currently lie within the boundary of the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District upon completion of the annexation; and

WHEREAS, the Tigard City Council held a public hearing on January 8, 2002 to consider the annexation of 8 parcels of land consisting of 33.68 acres and withdrawal of said property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District; and

WHEREAS, pursuant to ORS 222.520(2) the City is liable to the Water District for certain debt obligations, however, in this instance the Water District has no debt for the City to assume, therefore, no option regarding the assumption of debt needs to be made; and

WHEREAS, pursuant to Metro 3.09, ORS 222.120 and 222.524, notice was given and the City held a public hearing on the issue of the annexation into the City and withdrawal of the annexed property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District on January 8, 2002; and

WHEREAS, pursuant to ORS 222.524, the City must declare the withdrawal of annexed properties from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District by Ordinance; and

WHEREAS, the Tigard Development Code states that upon annexation, the zone is automatically changed to the City zoning most closely conforming to the County zoning; and

WHEREAS, the current and proposed zoning district is R-7, therefore, no zone change is necessary; and

WHEREAS, the annexation has been processed in accordance with the requirements of Metro 3.09 and has been reviewed for compliance with the Tigard Community Development Code and the Comprehensive Plan and the annexation substantially addresses the standards in Metro 3.09 regulating annexations; and

WHEREAS, the City Council has carefully considered the testimony at the public hearing and determined that withdrawal of the annexed properties from the applicable service districts is in the best interest of the City of Tigard.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The Tigard City Council hereby annexes the parcel described in the attached **Exhibit "A"** and shown in **Exhibit "B"** and withdraws said parcel from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District.

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor and posting by the City Recorder.

SECTION 3: The City Recorder is hereby directed to file certified copies of the Ordinance with Metro for administrative processing.

SECTION 4: Pursuant to ORS 222.120(5), the effective date of the withdrawal of the property from the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District shall be the effective date of this annexation.

SECTION 5: Pursuant to ORS 222.465, the effective date of the withdrawal of this property from the Tigard Water District shall be February 8, 2002.

SECTION 6: In accordance with ORS 222.180, the annexation shall be effective upon filing with the Secretary of State.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date

EXHIBIT A

DOR 34-P125-2001 **(OPTION #1)**

Preliminary Review

City of Tigard
Mathew SCheidegger
503-639-4171 x 317

A tract of land located within the southeast one-quarter of Section 5, Township 2 South, Range 1 West, W.M., Washington County, Oregon, being all of those properties conveyed by Documents No. 98003628, 96083948, 95037734, 93041431, 91063265, & 90039399, and a portion of that property conveyed by Document No. 92022661, and being more particularly described as follows:

Commencing at a 3-1/4" brass disk found for the corner common to Section 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the line common to said Sections 4 and 5, North 00°54'00" East, 199.81 feet to the Point of Beginning;

Thence, leaving said section line, along the north line of that property conveyed by Document No. 93062234, North 89°50'03" West, 208.00 feet to the northeast corner of that property conveyed by Document No. 95050603;

Thence, along the north line of last said property, South 70°24'32" West, 110.59 feet;

Thence, continuing along said north line, North 88°15'03" West, 89.75 feet to the northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West 145.55 feet to the north right-of-way line of SW Sunrise Lane (20-foot wide) as dedicated in Deed Book 148, Page 546;

Thence, along said north right-of-way line, North 89°50'00" West, 50.00 feet to the most westerly line of said property conveyed by Document No. 98003628;

Thence, along said most westerly line and the most southerly west line of that property conveyed by Document No. 96083948, North 0°56'42" East, 530 feet, more or less, to the center of a ravine;

Thence, Northwesterly down the center of said ravine, 750 feet, more or less, to the most westerly south line of said property conveyed by Document No. 95037734;

Thence, along said most westerly south line, North 89°30'16" West, 704.90 feet, more or less, to the east right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said east right-of-way line, North 03°49'59" East, 100.17 feet to the most westerly north line of said property conveyed by Document No. 90039399;

Thence, along said most westerly north line, South 89°30'16" East, 1,057.84 feet, more or less, to the southeast corner of that property conveyed by Document No. 92022661;

Thence, along the east line thereof, North 00°59'42" East, 188.64 feet;

Thence, leaving last said east line, North 89°00'18" West, 122.98 feet;

Thence North 00°59'42" East, 144.19 feet to the most westerly south line of said property conveyed by Document No. 93041431;

Thence, along said most westerly south line, North 87°15'50" West, 838.61 feet to the southwest corner thereof;

Thence, along the west line of the last said property, North 10°21'58" East, 412.41 feet to the south right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said south right-of-way line, North 89°34'49" East, 66.45 feet to the northerly line of Street Vacation No. 391, (Document No. 990111175);

Thence, along said northerly line, on the arc of a 195.83-foot radius curve left, through an angle of 12°35'45", (the chord of which bears North 64°17'52" East, 42.96 feet), an arc length of 43.05 feet to the west line of "Hillshire Creek Estates No. 4", (Document No. 2000048405);

Thence, along said west line, South 10°21'58" West, 335.85 feet to the southwest corner thereof;

Thence, along the south line of the last said property, South 87°15'50" East, 844.32 feet to the southeast corner thereof;

Thence, along the east line of the last said property, North 0°55'40" East, 712.21 feet to the northeast corner thereof, also being the southwest corner of "Hillshire Creek Estates", (Document No. 96045841);

Thence, along the south line of said "Hillshire Creek Estates", South 89°42'05" East, 424.57 feet to the southeast corner thereof, also being on the line common to said Sections 4 and 5;

Thence, along last said line South 0°54'00" West, 2,212.00 feet to the Point of Beginning.

EXCEPTING THEREFROM that property conveyed by Document No. 98026779, being more particularly described as follows:

Beginning at the northeast corner of said property conveyed by Document No. 9806779, which point bears North 00°54'00" East, 479.83 feet and North 89°50'18" West, 50.00 feet from a 3-1/4" brass disk found for the corner common to Sections 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the north line of last said property, North 89°50'18" West, 376.34 feet to the Northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West, 263.55 feet to the southwest corner thereof;

Thence, along the south line thereof South 88°15'03" East, 106.19 feet to an angle point therein;

Thence, continuing along the south line thereof, North 70°45'57" East, 287.93 feet to the southeast corner thereof;

Thence, along the east line thereof, North 00°54'00" East, 170.86 feet to the True Point of Beginning.

Total area of annexation is 28.617 acres, more or less.

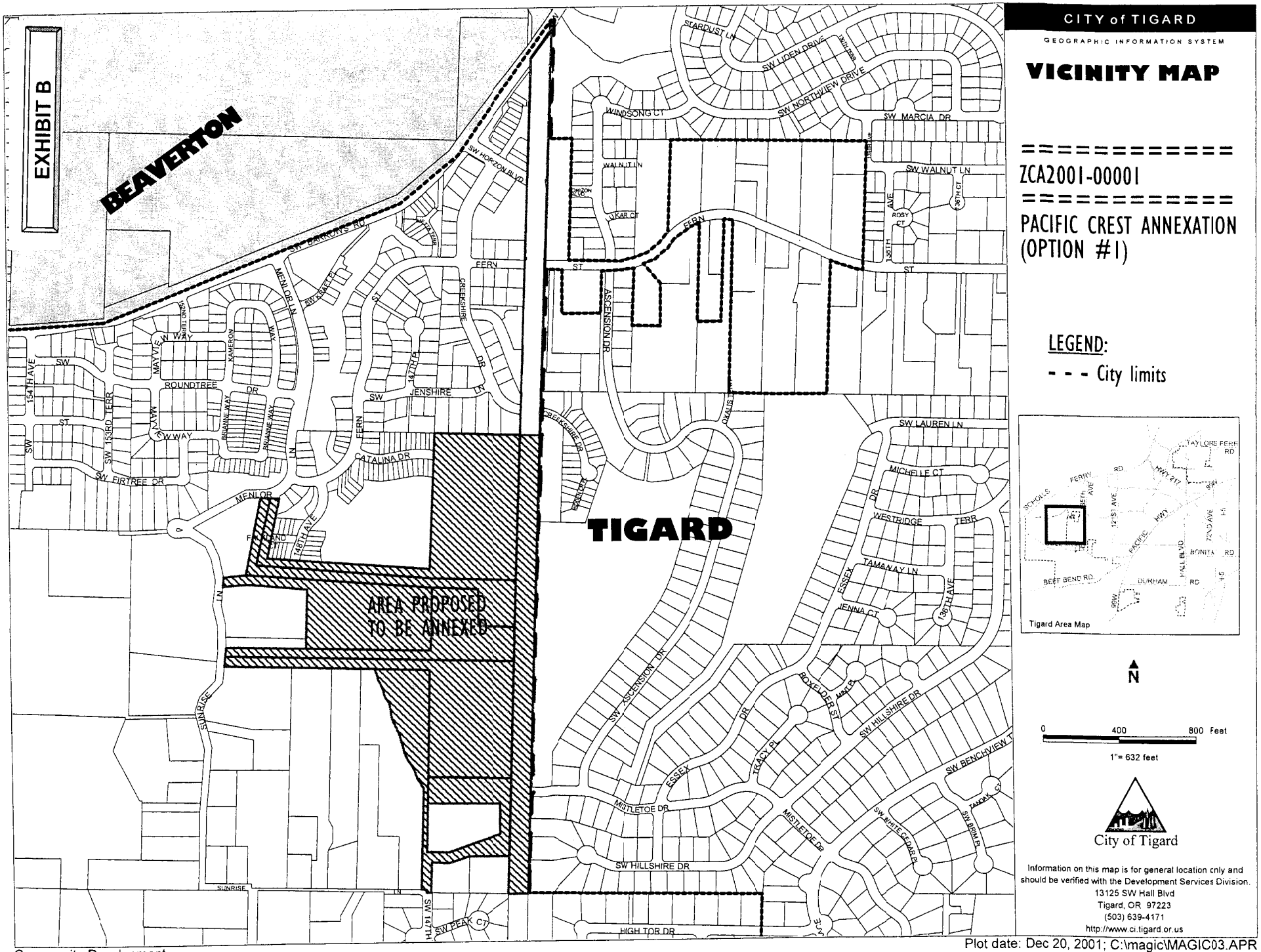
All document references are from Washington County Deed Records.

Bearings are based on the east line of Section 5, T. 2 S., R. 1 W., W.M., per Washington County Survey Number 27,241.

ALSO INCLUDING the following described property:

Commencing at the corner to section 4,5,8, and 9, Township 2 South, Range 1 West W.M.; Thence along the line common to said Sections 4 and 5 N 00° 54' 00" E 199.81 feet to **the True Point of Beginning;** Thence N 00° 54' 00" E, along said section line, 2,212 feet; Thence S 89° 06' 00" E, 100.00 feet to the east right-of-way of Bonneville Power Administration right-of-way; Thence S 00° 54' 00" W, Parallel with and 100 feet from said section line and along said right-of-way, 2,212 feet; Thence N 89° 06' 00" W, 100.00 feet to the True Point of beginning

Containing 5.08 Acres additional to annexed.



Community Development

Plot date: Dec 20, 2001; C:\magic\MAGIC03.APR

CITY OF TIGARD, OREGON

Attachment 2
(Option #2)

ORDINANCE NO. 2002- _____

AN ORDINANCE ADOPTING FINDINGS AND CONCLUSIONS TO APPROVE AN ANNEXATION (ZCA) 2001-00001/PACIFIC CREST ANNEXATION AND WITHDRAWING PROPERTY FROM THE TIGARD WATER DISTRICT, WASHINGTON COUNTY ENHANCED SHERIFF'S PATROL DISTRICT, WASHINGTON COUNTY URBAN ROADS MAINTENANCE DISTRICT, WASHINGTON COUNTY STREET LIGHTING DISTRICT #1, CLEAN WATER SERVICES, AND THE WASHINGTON COUNTY VECTOR CONTROL DISTRICT.

WHEREAS, the City of Tigard is authorized by ORS 222.120(4)(B) and 222.170 to initiate an annexation upon receiving consent in writing from a majority of the electors registered in the territory proposed to be annexed and written consent from owners of more than half the land in the territory proposed to be annexed; and

WHEREAS, the City if Tigard is authorized by ORS 222.120(5) and 222.520 to withdraw properties which currently lie within the boundary of the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District upon completion of the annexation; and

WHEREAS, the Tigard City Council held a public hearing on January 8, 2002 to consider the annexation of 9 parcels of land consisting of 35.68 acres and withdrawal of said property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District; and

WHEREAS, pursuant to ORS 222.520(2) the City is liable to the Water District for certain debt obligations, however, in this instance the Water District has no debt for the City to assume, therefore, no option regarding the assumption of debt needs to be made; and

WHEREAS, pursuant to Metro 3.09, ORS 222.120 and 222.524, notice was given and the City held a public hearing on the issue of the annexation into the City and withdrawal of the annexed property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District on January 8, 2002; and

WHEREAS, pursuant to ORS 222.524, the City must declare the withdrawal of annexed properties from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District by Ordinance; and

WHEREAS, the Tigard Development Code states that upon annexation, the zone is automatically changed to the City zoning most closely conforming to the County zoning; and

WHEREAS, the current and proposed zoning district is R-7, therefore, no zone change is necessary; and

WHEREAS, the annexation has been processed in accordance with the requirements of Metro 3.09 and has been reviewed for compliance with the Tigard Community Development Code and the Comprehensive Plan and the annexation substantially addresses the standards in Metro 3.09 regulating annexations; and

WHEREAS, the City Council has carefully considered the testimony at the public hearing and determined that withdrawal of the annexed properties from the applicable service districts is in the best interest of the City of Tigard.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The Tigard City Council hereby annexes the parcel described in the attached **Exhibit "A"** and shown in **Exhibit "B"** and withdraws said parcel from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District.

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor and posting by the City Recorder.

SECTION 3: The City Recorder is hereby directed to file certified copies of the Ordinance with Metro for administrative processing.

SECTION 4: Pursuant to ORS 222.120(5), the effective date of the withdrawal of the property from the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District shall be the effective date of this annexation.

SECTION 5: Pursuant to ORS 222.465, the effective date of the withdrawal of this property from the Tigard Water District shall be February 8, 2002.

SECTION 6: In accordance with ORS 222.180, the annexation shall be effective upon filing with the Secretary of State.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date

EXHIBIT A

DOR 34-P125-2001 **(OPTION #2)**

Preliminary Review

City of Tigard
Mathew SCheidegger
503-639-4171 x 317

A tract of land located within the southeast one-quarter of Section 5, Township 2 South, Range 1 West, W.M., Washington County, Oregon, being all of those properties conveyed by Documents No. 98003628, 96083948, 95037734, 93041431, 91063265, & 90039399, and a portion of that property conveyed by Document No. 92022661, and being more particularly described as follows:

Commencing at a 3-1/4" brass disk found for the corner common to Section 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the line common to said Sections 4 and 5, North 00°54'00" East, 199.81 feet to the Point of Beginning;

Thence, leaving said section line, along the north line of that property conveyed by Document No. 93062234, North 89°50'03" West, 208.00 feet to the northeast corner of that property conveyed by Document No. 95050603;

Thence, along the north line of last said property, South 70°24'32" West, 110.59 feet;

Thence, continuing along said north line, North 88°15'03" West, 89.75 feet to the northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West 145.55 feet to the north right-of-way line of SW Sunrise Lane (20-foot wide) as dedicated in Deed Book 148, Page 546;

Thence, along said north right-of-way line, North 89°50'00" West, 50.00 feet to the most westerly line of said property conveyed by Document No. 98003628;

Thence, along said most westerly line and the most southerly west line of that property conveyed by Document No. 96083948, North 0°56'42" East, 530 feet, more or less, to the center of a ravine;

Thence, Northwesterly down the center of said ravine, 750 feet, more or less, to the most westerly south line of said property conveyed by Document No. 95037734;

Thence, along said most westerly south line, North 89°30'16" West, 704.90 feet, more or less, to the east right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said east right-of-way line, North 03°49'59" East, 100.17 feet to the most westerly north line of said property conveyed by Document No. 90039399;

Thence, along said most westerly north line, South 89°30'16" East, 1,057.84 feet, more or less, to the southeast corner of that property conveyed by Document No. 92022661;

Thence, along the east line thereof, North 00°59'42" East, 188.64 feet;

Thence, leaving last said east line, North 89°00'18" West, 122.98 feet;

Thence North 00°59'42" East, 144.19 feet to the most westerly south line of said property conveyed by Document No. 93041431;

Thence, along said most westerly south line, North 87°15'50" West, 838.61 feet to the southwest corner thereof;

Thence, along the west line of the last said property, North 10°21'58" East, 412.41 feet to the south right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said south right-of-way line, North 89°34'49" East, 66.45 feet to the northerly line of Street Vacation No. 391, (Document No. 990111175);

Thence, along said northerly line, on the arc of a 195.83-foot radius curve left, through an angle of 12°35'45", (the chord of which bears North 64°17'52" East, 42.96 feet), an arc length of 43.05 feet to the west line of "Hillshire Creek Estates No. 4", (Document No. 2000048405);

Thence, along said west line, South 10°21'58" West, 335.85 feet to the southwest corner thereof;

Thence, along the south line of the last said property, South 87°15'50" East, 844.32 feet to the southeast corner thereof;

Thence, along the east line of the last said property, North 0°55'40" East, 712.21 feet to the northeast corner thereof, also being the southwest corner of "Hillshire Creek Estates", (Document No. 96045841);

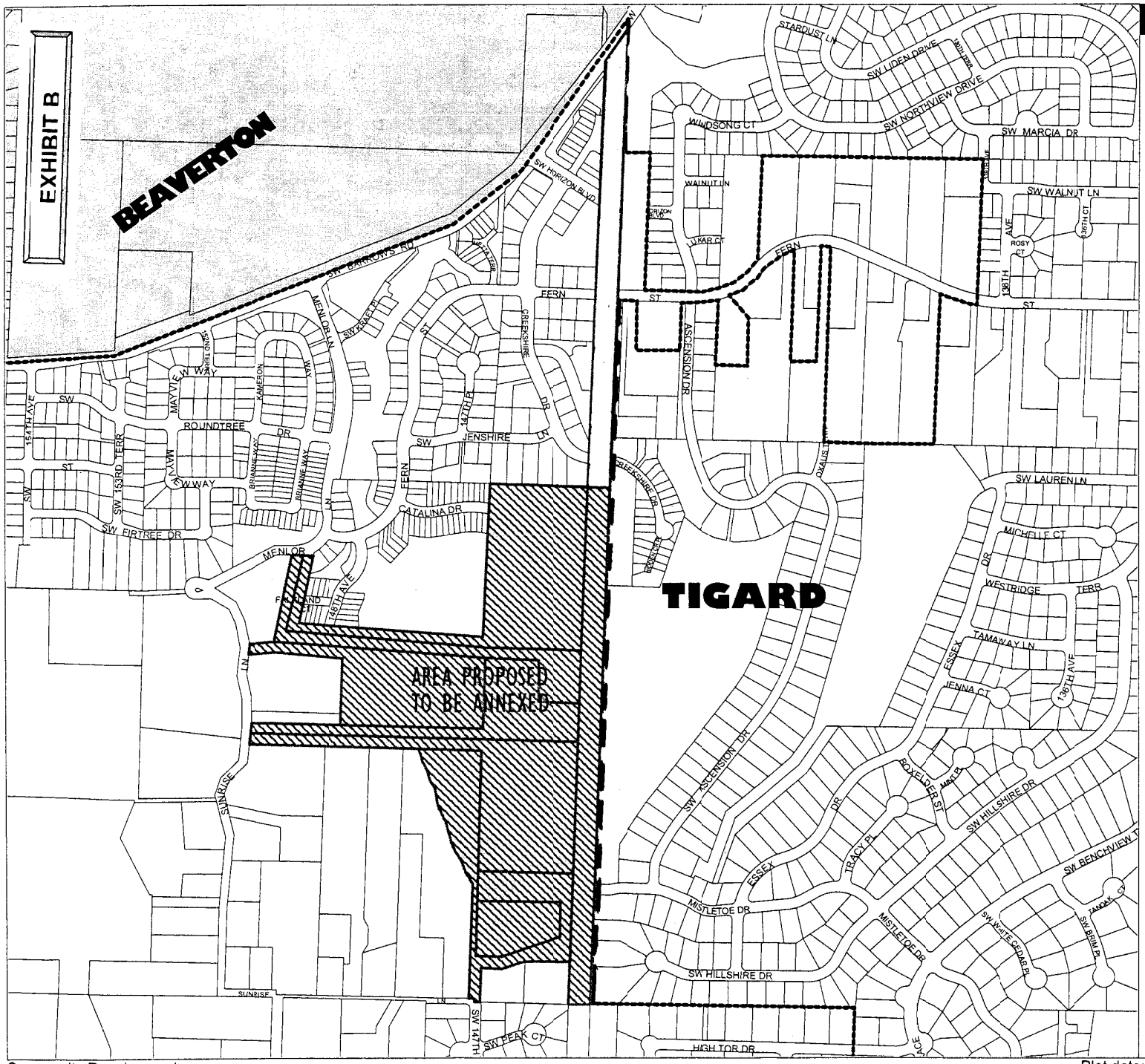
Thence, along the south line of said "Hillshire Creek Estates", South 89°42'05" East, 424.57 feet to the southeast corner thereof, also being on the line common to said Sections 4 and 5;

Thence, along last said line South 0°54'00" West, 2,212.00 feet to the Point of Beginning.

ALSO INCLUDING the following described property:

Commencing at the corner to section 4,5,8, and 9, Township 2 South, Range 1 West W.M.; Thence along the line common to said Sections 4 and 5 N 00° 54' 00" E 199.81 feet to **the True Point of Beginning;** Thence N 00° 54' 00" E, along said section line, 2,212 feet; Thence S 89° 06' 00" E, 100.00 feet to the east right-of-way of Bonneville Power Administration right-of-way; Thence S 00° 54' 00" W, Parallel with and 100 feet from said section line and along said right-of-way, 2,212 feet; Thence N 89° 06' 00" W, 100.00 feet to the True Point of beginning

Containing 5.08 Acres additional to annexed.



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

VICINITY MAP

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ZCA2001-00001

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PACIFIC CREST ANNEXATION (OPTION #2)

LEGEND:

- - - City limits

N

0 400 800 Feet

1"= 632 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Dec 20, 2001; C:\magic\MAGIC03.APR

CITY OF TIGARD, OREGON

Attachment 3
(Option #3)

ORDINANCE NO. 2002- _____

AN ORDINANCE ADOPTING FINDINGS AND CONCLUSIONS TO APPROVE AN ANNEXATION (ZCA) 2001-00001/PACIFIC CREST ANNEXATION AND WITHDRAWING PROPERTY FROM THE TIGARD WATER DISTRICT, WASHINGTON COUNTY ENHANCED SHERIFF'S PATROL DISTRICT, WASHINGTON COUNTY URBAN ROADS MAINTENANCE DISTRICT, WASHINGTON COUNTY STREET LIGHTING DISTRICT #1, CLEAN WATER SERVICES, AND THE WASHINGTON COUNTY VECTOR CONTROL DISTRICT.

WHEREAS, the City of Tigard is authorized by ORS 222.120(4)(B) and 222.170 to initiate an annexation upon receiving consent in writing from a majority of the electors registered in the territory proposed to be annexed and written consent from owners of more than half the land in the territory proposed to be annexed; and

WHEREAS, the City if Tigard is authorized by ORS 222.120(5) and 222.520 to withdraw properties which currently lie within the boundary of the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District upon completion of the annexation; and

WHEREAS, the Tigard City Council held a public hearing on January 8, 2002 to consider the annexation of 8 parcels of land consisting of 38.5 acres and withdrawal of said property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District; and

WHEREAS, pursuant to ORS 222.520(2) the City is liable to the Water District for certain debt obligations, however, in this instance the Water District has no debt for the City to assume, therefore, no option regarding the assumption of debt needs to be made; and

WHEREAS, pursuant to Metro 3.09, ORS 222.120 and 222.524, notice was given and the City held a public hearing on the issue of the annexation into the City and withdrawal of the annexed property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District on January 8, 2002; and

WHEREAS, pursuant to ORS 222.524, the City must declare the withdrawal of annexed properties from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District by Ordinance; and

WHEREAS, the Tigard Development Code states that upon annexation, the zone is automatically changed to the City zoning most closely conforming to the County zoning; and

WHEREAS, the current and proposed zoning district is R-7, therefore, no zone change is necessary; and

WHEREAS, the annexation has been processed in accordance with the requirements of Metro 3.09 and has been reviewed for compliance with the Tigard Community Development Code and the Comprehensive Plan and the annexation substantially addresses the standards in Metro 3.09 regulating annexations; and

WHEREAS, the City Council has carefully considered the testimony at the public hearing and determined that withdrawal of the annexed properties from the applicable service districts is in the best interest of the City of Tigard.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The Tigard City Council hereby annexes the parcel described in the attached **Exhibit "A"** and shown in **Exhibit "B"** and withdraws said parcel from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District.

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor and posting by the City Recorder.

SECTION 3: The City Recorder is hereby directed to file certified copies of the Ordinance with Metro for administrative processing.

SECTION 4: Pursuant to ORS 222.120(5), the effective date of the withdrawal of the property from the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District shall be the effective date of this annexation.

SECTION 5: Pursuant to ORS 222.465, the effective date of the withdrawal of this property from the Tigard Water District shall be February 8, 2002.

SECTION 6: In accordance with ORS 222.180, the annexation shall be effective upon filing with the Secretary of State.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date

EXHIBIT A

DOR 34-P125-2001 **Option 3** **City of Tigard**
Mathew SCheidegger
Preliminary Review **503-639-4171 x 317**

A tract of land located within the southeast one-quarter of Section 5, Township 2 South, Range 1 West, W.M., Washington County, Oregon, being all of those properties conveyed by Documents No. 98003628, 96083948, 95037734, 93041431, 91063265, & 90039399, and a portion of that property conveyed by Document No. 92022661, and being more particularly described as follows:

Commencing at a 3-1/4" brass disk found for the corner common to Section 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the line common to said Sections 4 and 5, North 00°54'00" East, 199.81 feet to the Point of Beginning;

Thence, leaving said section line, along the north line of that property conveyed by Document No. 93062234, North 89°50'03" West, 208.00 feet to the northeast corner of that property conveyed by Document No. 95050603;

Thence, along the north line of last said property, South 70°24'32" West, 110.59 feet;

Thence, continuing along said north line, North 88°15'03" West, 89.75 feet to the northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West 145.55 feet to the north right-of-way line of SW Sunrise Lane (20-foot wide) as dedicated in Deed Book 148, Page 546;

Thence, along said north right-of-way line, North 89°50'00" West, 50.00 feet to the most westerly line of said property conveyed by Document No. 98003628;

Thence, along said most westerly line and the most southerly west line of that property conveyed by Document No. 96083948, North 0°56'42" East, 530 feet, more or less, to the center of a ravine;

Thence, Northwesterly down the center of said ravine, 750 feet, more or less, to the most westerly south line of said property conveyed by Document No. 95037734;

Thence, along said most westerly south line, North 89°30'16" West, 704.90 feet, more or less, to the east right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said east right-of-way line, North 03°49'59" East, 100.17 feet to the most westerly north line of said property conveyed by Document No. 90039399;

Thence, along said most westerly north line, South 89°30'16" East, 1,057.84 feet, more or less, to the southeast corner of that property conveyed by Document No. 92022661;

Thence, along the east line thereof, North 00°59'42" East, 188.64 feet;

Thence, leaving last said east line, North 89°00'18" West, 122.98 feet;

Thence North 00°59'42" East, 144.19 feet to the most westerly south line of said property conveyed by Document No. 93041431;

Thence, along said most westerly south line, North 87°15'50" West, 838.61 feet to the southwest corner thereof;

Thence, along the west line of the last said property, North 10°21'58" East, 412.41 feet to the south right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said south right-of-way line, North 89°34'49" East, 66.45 feet to the northerly line of Street Vacation No. 391, (Document No. 990111175);

Thence, along said northerly line, on the arc of a 195.83-foot radius curve left, through an angle of 12°35'45", (the chord of which bears North 64°17'52" East, 42.96 feet), an arc length of 43.05 feet to the west line of "Hillshire Creek Estates No. 4", (Document No. 2000048405);

Thence, along said west line, South 10°21'58" West, 335.85 feet to the southwest corner thereof;

Thence, along the south line of the last said property, South 87°15'50" East, 844.32 feet to the southeast corner thereof;

Thence, along the east line of the last said property, North 0°55'40" East, 712.21 feet to the northeast corner thereof, also being the southwest corner of "Hillshire Creek Estates", (Document No. 96045841);

Thence, along the south line of said "Hillshire Creek Estates", South 89°42'05" East, 424.57 feet to the southeast corner thereof, also being on the line common to said Sections 4 and 5;

Thence, along last said line South 0°54'00" West, 2,212.00 feet to the Point of Beginning.

EXCEPTING THEREFROM that property conveyed by Document No. 98026779, being more particularly described as follows:

Beginning at the northeast corner of said property conveyed by Document No. 9806779, which point bears North 00°54'00" East, 479.83 feet and North 89°50'18" West, 50.00 feet from a 3-1/4" brass disk found for the corner common to Sections 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the north line of last said property, North 89°50'18" West, 376.34 feet to the Northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West, 263.55 feet to the southwest corner thereof;

Thence, along the south line thereof South 88°15'03" East, 106.19 feet to an angle point therein;

Thence, continuing along the south line thereof, North 70°45'57" East, 287.93 feet to the southeast corner thereof;

Thence, along the east line thereof, North 00°54'00" East, 170.86 feet to the True Point of Beginning.

Total area of annexation is 28.617 acres, more or less.

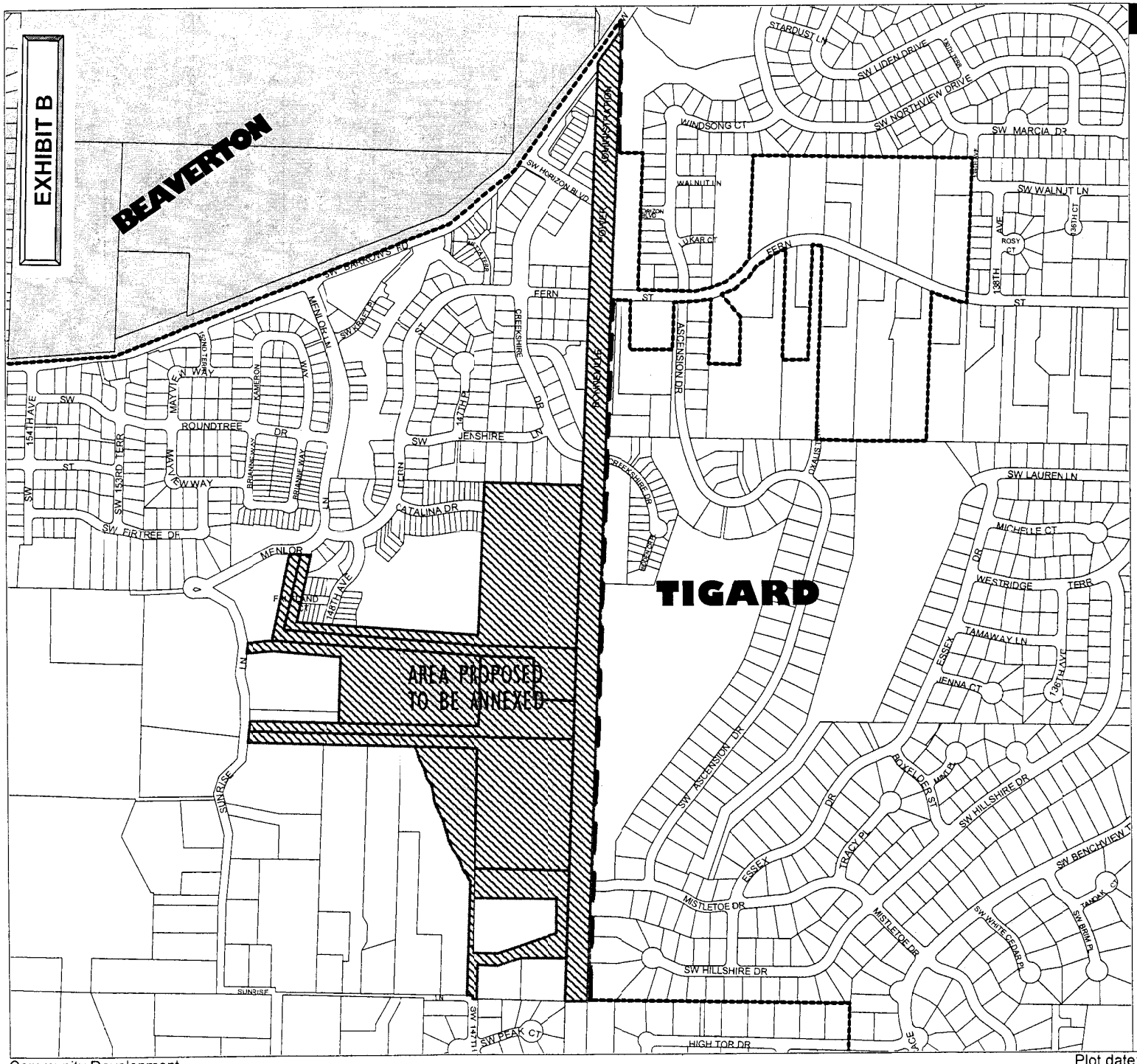
All document references are from Washington County Deed Records.

Bearings are based on the east line of Section 5, T. 2 S., R. 1 W., W.M., per Washington County Survey Number 27,241.

Containing 9.90 Acres additional to annexed. **ALSO INCLUDING** the following described property:

Commencing at the corner to section 4,5,8, and 9, Township 2 South, Range 1 West W.M.; Thence along the line common to said Sections 4 and 5 N 00° 54' 00" E 199.81 feet to **the True Point of Beginning;** Thence N 00° 54' 00" E, along said section line, 2,438.37 feet to the ¼ Corner between Section 4 & 5; Thence N 00° 56' 00" E, along said section line, 1794.56 feet to the southerly right-of-way of SW Barrows Road; Thence N 32° 45' 10" E, along said southerly right-of-way line, 189.67 feet; Thence S 00° 56' 00" W, parallel with and 100 feet from said section line, 1955.69 feet Thence S 00° 54' 00" W, Parallel with and 100 feet from said section line, 2,2438.34 feet; Thence N 89° 06' 00" W, 100.00 feet to the True Point of beginning.

Containing 9.90 Acres additional to annexed.



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

VICINITY MAP

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ZCA2001-00001

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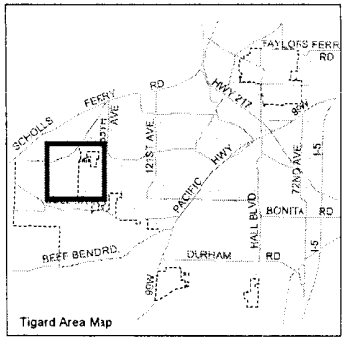
PACIFIC CREST ANNEXATION (OPTION #3)

LEGEND:

- - - City limits



N

0 400 800 Feet

1"= 632 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Dec 20, 2001; C:\magic\MAGIC03.APR

CITY OF TIGARD, OREGON

Attachment 4
(Option #4)

ORDINANCE NO. 2002- _____

AN ORDINANCE ADOPTING FINDINGS AND CONCLUSIONS TO APPROVE AN ANNEXATION (ZCA) 2001-00001/PACIFIC CREST ANNEXATION AND WITHDRAWING PROPERTY FROM THE TIGARD WATER DISTRICT, WASHINGTON COUNTY ENHANCED SHERIFF'S PATROL DISTRICT, WASHINGTON COUNTY URBAN ROADS MAINTENANCE DISTRICT, WASHINGTON COUNTY STREET LIGHTING DISTRICT #1, CLEAN WATER SERVICES, AND THE WASHINGTON COUNTY VECTOR CONTROL DISTRICT.

WHEREAS, the City of Tigard is authorized by ORS 222.120(4)(B) and 222.170 to initiate an annexation upon receiving consent in writing from a majority of the electors registered in the territory proposed to be annexed and written consent from owners of more than half the land in the territory proposed to be annexed; and

WHEREAS, the City if Tigard is authorized by ORS 222.120(5) and 222.520 to withdraw properties which currently lie within the boundary of the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District upon completion of the annexation; and

WHEREAS, the Tigard City Council held a public hearing on January 8, 2002 to consider the annexation of 9 parcels of land consisting of 40.5 acres and withdrawal of said property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District; and

WHEREAS, pursuant to ORS 222.520(2) the City is liable to the Water District for certain debt obligations, however, in this instance the Water District has no debt for the City to assume, therefore, no option regarding the assumption of debt needs to be made; and

WHEREAS, pursuant to Metro 3.09, ORS 222.120 and 222.524, notice was given and the City held a public hearing on the issue of the annexation into the City and withdrawal of the annexed property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District on January 8, 2002; and

WHEREAS, pursuant to ORS 222.524, the City must declare the withdrawal of annexed properties from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District by Ordinance; and

WHEREAS, the Tigard Development Code states that upon annexation, the zone is automatically changed to the City zoning most closely conforming to the County zoning; and

WHEREAS, the current and proposed zoning district is R-7, therefore, no zone change is necessary; and

WHEREAS, the annexation has been processed in accordance with the requirements of Metro 3.09 and has been reviewed for compliance with the Tigard Community Development Code and the Comprehensive Plan and the annexation substantially addresses the standards in Metro 3.09 regulating annexations; and

WHEREAS, the City Council has carefully considered the testimony at the public hearing and determined that withdrawal of the annexed properties from the applicable service districts is in the best interest of the City of Tigard.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The Tigard City Council hereby annexes the parcel described in the attached **Exhibit "A"** and shown in **Exhibit "B"** and withdraws said parcel from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District.

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor and posting by the City Recorder.

SECTION 3: The City Recorder is hereby directed to file certified copies of the Ordinance with Metro for administrative processing.

SECTION 4: Pursuant to ORS 222.120(5), the effective date of the withdrawal of the property from the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District shall be the effective date of this annexation.

SECTION 5: Pursuant to ORS 222.465, the effective date of the withdrawal of this property from the Tigard Water District shall be February 8, 2002.

SECTION 6: In accordance with ORS 222.180, the annexation shall be effective upon filing with the Secretary of State.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date

EXHIBIT A

DOR 34-P125-2001 **Option 4** **City of Tigard**
Mathew SCheidegger
Preliminary Review **503-639-4171 x 317**

A tract of land located within the southeast one-quarter of Section 5, Township 2 South, Range 1 West, W.M., Washington County, Oregon, being all of those properties conveyed by Documents No. 98003628, 96083948, 95037734, 93041431, 91063265, & 90039399, and a portion of that property conveyed by Document No. 92022661, and being more particularly described as follows:

Commencing at a 3-1/4" brass disk found for the corner common to Section 4, 5, 8 and 9, Township 2 South, Range 1 West, W.M.;

Thence, along the line common to said Sections 4 and 5, North 00°54'00" East, 199.81 feet to the Point of Beginning;

Thence, leaving said section line, along the north line of that property conveyed by Document No. 93062234, North 89°50'03" West, 208.00 feet to the northeast corner of that property conveyed by Document No. 95050603;

Thence, along the north line of last said property, South 70°24'32" West, 110.59 feet;

Thence, continuing along said north line, North 88°15'03" West, 89.75 feet to the northwest corner thereof;

Thence, along the west line thereof, South 00°56'42" West 145.55 feet to the north right-of-way line of SW Sunrise Lane (20-foot wide) as dedicated in Deed Book 148, Page 546;

Thence, along said north right-of-way line, North 89°50'00" West, 50.00 feet to the most westerly line of said property conveyed by Document No. 98003628;

Thence, along said most westerly line and the most southerly west line of that property conveyed by Document No. 96083948, North 0°56'42" East, 530 feet, more or less, to the center of a ravine;

Thence, Northwesterly down the center of said ravine, 750 feet, more or less, to the most westerly south line of said property conveyed by Document No. 95037734;

Thence, along said most westerly south line, North 89°30'16" West, 704.90 feet, more or less, to the east right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said east right-of-way line, North 03°49'59" East, 100.17 feet to the most westerly north line of said property conveyed by Document No. 90039399;

Thence, along said most westerly north line, South 89°30'16" East, 1,057.84 feet, more or less, to the southeast corner of that property conveyed by Document No. 92022661;

Thence, along the east line thereof, North 00°59'42" East, 188.64 feet;

Thence, leaving last said east line, North 89°00'18" West, 122.98 feet;

Thence North 00°59'42" East, 144.19 feet to the most westerly south line of said property conveyed by Document No. 93041431;

Thence, along said most westerly south line, North 87°15'50" West, 838.61 feet to the southwest corner thereof;

Thence, along the west line of the last said property, North 10°21'58" East, 412.41 feet to the south right-of-way line of SW Menlor Lane (40-foot wide) as dedicated in Deed Book 147, Page 81;

Thence, along said south right-of-way line, North 89°34'49" East, 66.45 feet to the northerly line of Street Vacation No. 391, (Document No. 990111175);

Thence, along said northerly line, on the arc of a 195.83-foot radius curve left, through an angle of 12°35'45", (the chord of which bears North 64°17'52" East, 42.96 feet), an arc length of 43.05 feet to the west line of "Hillshire Creek Estates No. 4", (Document No. 2000048405);

Thence, along said west line, South 10°21'58" West, 335.85 feet to the southwest corner thereof;

Thence, along the south line of the last said property, South 87°15'50" East, 844.32 feet to the southeast corner thereof;

Thence, along the east line of the last said property, North 0°55'40" East, 712.21 feet to the northeast corner thereof, also being the southwest corner of "Hillshire Creek Estates", (Document No. 96045841);

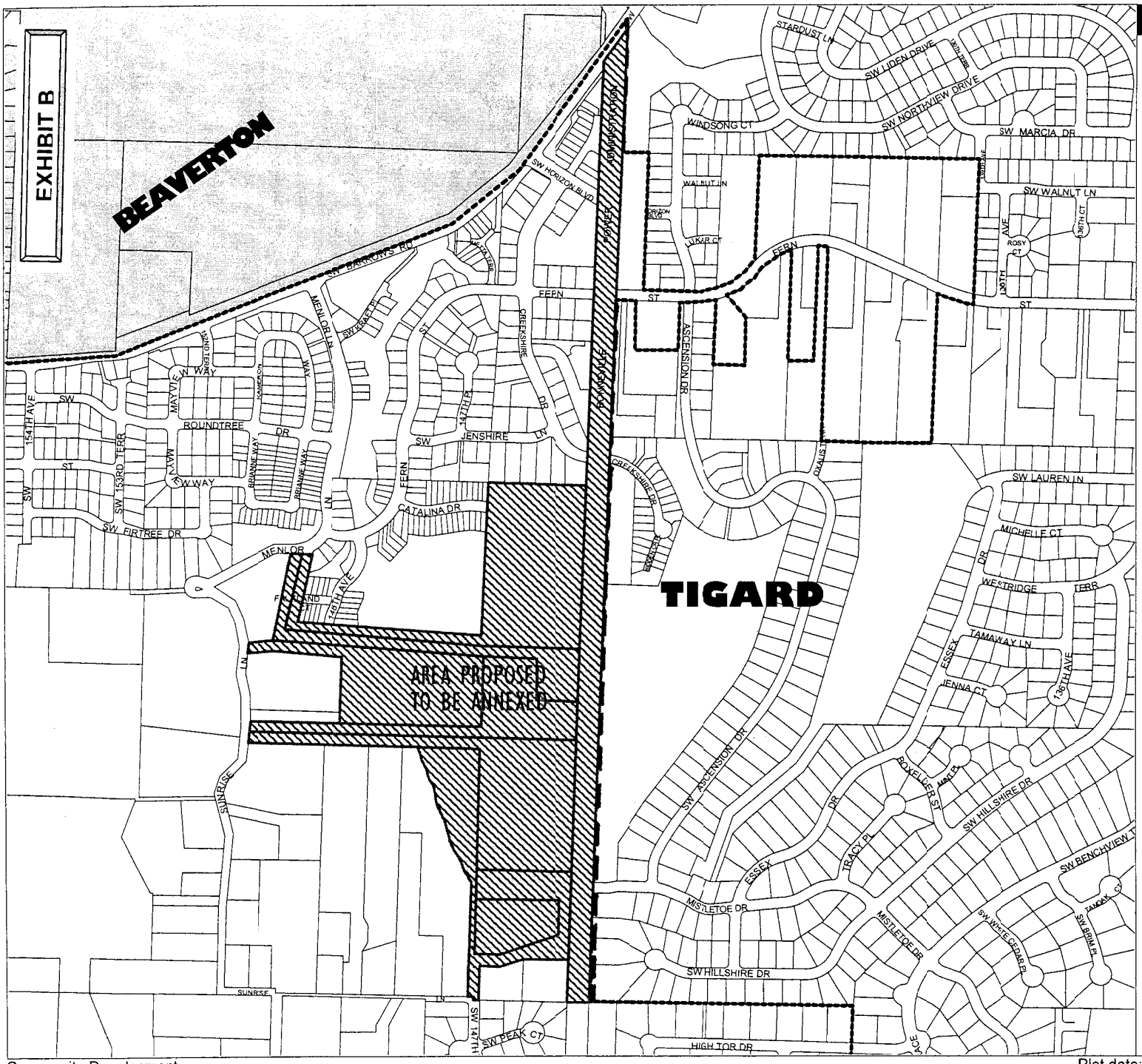
Thence, along the south line of said "Hillshire Creek Estates", South 89°42'05" East, 424.57 feet to the southeast corner thereof, also being on the line common to said Sections 4 and 5;

Thence, along last said line South 0°54'00" West, 2,212.00 feet to the Point of Beginning.

Containing 9.90 Acres additional to annexed. **ALSO INCLUDING** the following described property:

Commencing at the corner to section 4,5,8, and 9, Township 2 South, Range 1 West W.M.; Thence along the line common to said Sections 4 and 5 N 00° 54' 00" E 199.81 feet to **the True Point of Beginning;** Thence N 00° 54' 00" E, along said section line, 2,438.37 feet to the ¼ Corner between Section 4 & 5; Thence N 00° 56' 00" E, along said section line, 1794.56 feet to the southerly right-of-way of SW Barrows Road; Thence N 32° 45' 10" E, along said southerly right-of-way line, 189.67 feet; Thence S 00° 56' 00" W, parallel with and 100 feet from said section line, 1955.69 feet Thence S 00° 54' 00" W, Parallel with and 100 feet from said section line, 2,2438.34 feet; Thence N 89° 06' 00" W, 100.00 feet to the True Point of beginning.

Containing 9.90 Acres additional to annexed.



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

VICINITY MAP

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ZCA2001-00001

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PACIFIC CREST ANNEXATION (OPTION #4)

LEGEND:

- - - City limits

N

0 400 800 Feet

1"= 632 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Dec 20, 2001; C:\magic\MAGIC03.APR

Attachment 5

Agenda Item: _____
Hearing Date: January 8, 2002 7:30 PM

STAFF REPORT TO THE CITY COUNCIL FOR THE CITY OF TIGARD, OREGON

CITY OF TIGARD
Community Development
Shaping A Better Community

SECTION I. APPLICATION SUMMARY

FILE NAME: PACIFIC CREST ANNEXATION
CASE NO.: Zone Change Annexation (ZCA) ZCA2001-00001

APPLICANT: Farmer's Land Trust
26715 SW Baker Road
Sherwood, OR 97140

OWNER: Numerous Owners.
List is available upon request

PROPOSAL: The applicant is proposing to annex (7) parcels consisting of approximately 28.6 acres of land into the City of Tigard as part of the Pacific Crest Subdivision. Additional parcels are considered in four options.

CURRENT ZONING DESIGNATION: R-7.

EQUIVALENT CITY ZONING DESIGNATION: R-7, Medium Density Residential. The R-7 zoning district is designed to accommodate attached single-family homes, detached single-family homes with or without accessory residential units, at a minimum lot size of 5,000 square feet, and duplexes, at a minimum lot size of 10,000 square feet. Mobile home parks and subdivisions are also permitted outright. Some civic and institutional uses are also permitted conditionally.

LOCATION: WCTM 2S109DD, tax lot 100, 201, 1900, 2000, 2100; WCTM 2S105DA, tax lot 400 and 500; and WCTM 2S109BC, Tax Lot 7000. The project is located on the north side of SW Bull Mountain Road and south of SW Alpine View.

APPLICABLE REVIEW CRITERIA: Community Development Code Chapters 18.320 and 18.390; Comprehensive Plan Policies 2 and 10; Metro Code Chapter 3.09; and ORS Chapter 222.

SECTION II. STAFF RECOMMENDATION

Staff recommends that the Council find that the proposed annexation will not adversely affect the health, safety and welfare of the City. Therefore, staff recommends **APPROVAL** of the Annexation by adoption of the attached Ordinance (OPTION 4).

SECTION III. BACKGROUND INFORMATION

Site information and proposal description:

The proposed Pacific Crest annexation consists of seven parcels equaling 28.6 acres. The parcels are within the City of Tigard's urban services area, and have recently attained preliminary approval for a 65-lot subdivision. As a condition of approval, the Pacific Crest Subdivision is required to annex into the City of Tigard, per current annexation policy. However, further review showed that the annexation request did not border the Tigard city limits. The problem was resolved by including the Bonneville Power Administration easement that abuts the Tigard city limits, creating a uniform boundary.

In addition, the Pacific Crest annexation would create a 2.0 acre island within the subdivision. Staff has attempted to contact the owner of this property to be included with the proposed annexation with no success. Therefore, staff is presenting Council with 4 ordinance options. The property is already zoned with the County R-7 zoning designation and the proper zoning is concurrent with the annexation according to Section 18.320.020.C of the Community Development Code. The County zone will automatically convert to the City R-7 zone upon annexation approval by Council.

Staff has notified all affected agencies and CIT members of the proposed annexation. There was no objection to the annexation by those who returned comments. Staff has reviewed the proposal for compliance with Metro Chapter 3.09, the Comprehensive Plan Policies, the Tigard Development Code, and the Oregon Revised Statutes. As indicated in the staff report to City Council, the proposed annexation meets the applicable standards

Option #1

Approve the annexation of (8) parcels of approximately 33.68 acres into the City of Tigard and create a 2.0 acre island described as WCTM 2S109DD, Tax Lot 2200. This includes the section of the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels.

Option #2

Approve the annexation of (9) parcels of approximately 35.68 acres into the City of Tigard through the adoption of a separate ordinance by means of a double-majority. This includes the 2.0 acre island.

Option #3

Approve the annexation of (8) parcels of approximately 38.5 acres into the City of Tigard through the adoption of a separate ordinance. This includes the section of the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels all the way to SW Barrows Road. This would

create a 2.0 acre island described as WCTM 2S109DD, Tax Lot 2200 and additional islands to the east of the BPA easement along SW Fern Street but would provide one uniform boundary along the westerly boundary.

Option #4

Approve the annexation of (9) parcels of approximately 40.5 acres into the City of Tigard through the adoption of a separate ordinance. This includes the 2.0 acre island as well as the Bonneville Power Administration easement along the Pacific Crest Subdivision parcels all the way to SW Barrows Road. This also would create islands to the east of the BPA boundary along SW Fern Street and the uniform westerly boundary. This would provide the most complete option.

Vicinity Information:
The property is adjacent to the City of Tigard boundary, west of the terminus of SW Mistletoe, south of Hillshire Estates Subdivision, and east of Hillshire Creek Estates #4 Subdivision. The property on all sides is zoned R-7. There is a 20-foot-wide high pressure petroleum pipe line easement adjacent to the BPA right-of-way.

SECTION IV. APPLICABLE REVIEW CRITERIA AND FINDINGS

The relevant criteria in this case are Tigard Comprehensive Plan Policies 2.1.1, 10.1.1, 10.1.2, and; Tigard Community Development Code Chapter 18.320.

Staff has determined that the proposal is consistent with the relevant policies of the Comprehensive Plan based on the following findings:

Policy 2.1.1:
This Policy requires an ongoing citizen involvement program. The West CIT and surrounding property owners have been notified of the public hearing and notice of the hearing has been published in a newspaper of general circulation. The site has been posted since November 14, 2001, and the hearing was announced at the December Citizen Involvement meeting. There have been a number of opportunities for citizens to be involved in the decision making process.

Policy 10.1.1:
This Policy requires adequate service capacity delivery to annexed parcels. The City of Tigard Police, Engineering and Water Departments, Metro Area Communications, NW Natural Gas, Tualatin Valley Fire and Rescue, Tualatin Hills Park and Recreation District, and Clean Water Services have all reviewed the annexation request and have offered no objections. This policy has been complied with.

Policy 10.1.2:
This Policy pertains to boundary criteria for annexations and is satisfied. The property is adjacent to the Tigard city limits on the east boundary.

Staff has determined that the proposal is consistent with the relevant portions of the Community Development Code based on the following findings:

<u>Section 18.320.020:</u> This Section addresses approval standards for annexation proposals and is satisfied because:

The applicable Comprehensive Plan Policies and Community Development Code provisions have been reviewed and satisfied as previously indicated in this report.

The property is currently zoned R-7. Because this property is in the Urban Services Area, the equivalent zoning has already been attached to the property, therefore, the property does not need to be rezoned upon annexation.

Metro 3.09 requires the additional standards to be addressed in annexation decisions, in addition to the local and state review standards. These are addressed and satisfied as discussed below:

Consistency with the directly applicable provisions in an urban service provider agreement or annexation plan adopted pursuant to ORS 195.065;

The processing has been done consistent with applicable Urban Service Provider agreements.

Consistency with directly applicable provisions of urban planning or other agreement, other than agreements adopted pursuant to ORS 195.065, between the affected entity and a necessary party;

The process required by the Development Code and Comprehensive Plan is consistent with the Urban Planning Agreement for annexations.

Consistency with specific directly applicable standards or criteria for boundary changes contained in comprehensive land use plans and public facility plans;

This has been discussed previously in this report and, as discussed, this criterion is satisfied.

Consistency with specific directly applicable standards or criteria for boundary changes contained in the Regional Framework Plan or any functional plans;

Because the Development Code has been amended to comply with applicable Metro functional plan requirements, by complying with the Development Code and Comprehensive Plan, the annexation is consistent with the applicable functional plan and the Regional Framework plan.

Whether the proposed changes will promote or not interfere with the timely, orderly and economic provisions of public facilities and services;

The proposed annexation will not interfere with the provision of public facilities or services because it is adjacent to existing City limits and services. Many services have been extended to that area as a result of earlier development.

If the proposed boundary change is for annexation of territory to Metro, a determination by Metro Council that the territory should be included in the Urban Growth Boundary shall be the primary criterion for approval;

The subject property is already within the Metro boundaries.

Consistency with other applicable criteria for the boundary change in question under state and local law.

Consistency with other applicable criteria has been discussed previously in this report.

SECTION V. OTHER STAFF COMMENTS

The City of Tigard Engineering, Building, Police Department, Tualatin Valley Fire and Rescue, Public Works, and Water Department have all reviewed this proposal and have offered no objections to annexation.

SECTION VI. AGENCY COMMENTS

Clean Water Services, Metro Area Communications, NW Natural Gas, Tigard School District, Beaverton School District, and Washington County have had the opportunity to review the proposal and have offered no objections.

BASED ON THE FINDINGS INDICATED ABOVE, PLANNING STAFF RECOMMENDS APPROVAL OF ZONE CHANGE ANNEXATION (ZCA) 2001-00001 – PACIFIC CREST ANNEXATION.

PREPARED BY: Mathew Scheidegger
Assistant Planner

December 21, 2001
DATE

APPROVED BY: Richard Bewersdorff
Planning Manager

December 21, 2001
DATE

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Annexation (ZCA) 2001-00002 - Daffodil Hill Annexation

PREPARED BY: Brad Kilby DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Should the Tigard City Council annex a parcel of land consisting of approximately 3.16 acres of land?

STAFF RECOMMENDATION

Adopt the attached Ordinance annexing the property.

INFORMATION SUMMARY

The proposed annexation consists of 3.16 acres that currently exist in unincorporated Washington County. The parcel is within the City of Tigard's urban service area, and has recently attained preliminary approval for an 18-lot subdivision. The property is located at 13735 SW Bull Mountain Road, and is described as WCTM 2S109BA, tax lot 1400. The property is currently occupied by a house and barn that is proposed to be demolished for construction of the subdivision. Staff has asked the property owner directly to the east of this property to participate in the annexation in order to create a more uniform boundary. He expressed no interest.

Staff has notified all affected agencies and CIT members of the proposed annexation. There was no objection to the annexation by those who returned comments. Staff has reviewed the proposal for compliance with Metro Chapter 3.09, the Comprehensive Plan Policies, the Tigard Development Code, and the Oregon Revised Statutes. As indicated in the staff report to City Council, the proposed annexation meets the applicable standards. Pursuant to Chapter 18.320.020C of the Tigard Development Code, the Comprehensive Plan designation and the City's zoning is automatically applied to property upon approval of the annexation by Council.

OTHER ALTERNATIVES CONSIDERED

Denial of the request.

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

"Growth and Growth Management", Goal #2 – Urban services are provided to all citizens within Tigard’s urban growth boundary and recipients of services pay their share.

ATTACHMENT LIST

Attachments include two exhibits; Attachment 1 is the annexation Ordinance, and Attachment 2 is the staff report to City Council.

FISCAL NOTES

N/A The applicant is responsible for paying the Metro processing fee and has already paid the fees necessary to administer the application by planning staff.

CITY OF TIGARD, OREGON

ORDINANCE NO. 2002- _____

AN ORDINANCE ADOPTING FINDINGS AND CONCLUSIONS TO APPROVE AN ANNEXATION (ZCA) 2001-00002/DAFFODIL HILL ANNEXATION AND WITHDRAWING PROPERTY FROM THE TIGARD WATER DISTRICT, WASHINGTON COUNTY ENHANCED SHERIFF'S PATROL DISTRICT, WASHINGTON COUNTY URBAN ROADS MAINTENANCE DISTRICT, WASHINGTON COUNTY STREET LIGHTING DISTRICT #1, CLEAN WATER SERVICES, AND THE WASHINGTON COUNTY VECTOR CONTROL DISTRICT.

WHEREAS, the City of Tigard is authorized by ORS 222.120(4)(B) and 222.170 to initiate an annexation upon receiving consent in writing from a majority of the electors registered in the territory proposed to be annexed and written consent from owners of more than half the land in the territory proposed to be annexed; and

WHEREAS, the City of Tigard is authorized by ORS 222.120(5) and 222.520 to withdraw properties which currently lie within the boundary of the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District upon completion of the annexation; and

WHEREAS, the Tigard City Council held a public hearing on January 8, 2002 to consider the annexation of a parcel of land consisting of 3.16 acres and withdrawal of said property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District; and

WHEREAS, pursuant to ORS 222.520(2) the City is liable to the Water District for certain debt obligations, however, in this instance the Water District has no debt for the City to assume, therefore, no option regarding the assumption of debt needs to be made; and

WHEREAS, pursuant to Metro 3.09, ORS 222.120 and 222.524, notice was given and the City held a public hearing on the issue of the annexation into the City and withdrawal of the annexed property from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District on January 8, 2002; and

WHEREAS, pursuant to ORS 222.524, the City must declare the withdrawal of annexed properties from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District by Ordinance; and

WHEREAS, the Tigard Development Code states that upon annexation, the zone is automatically changed to the City zoning most closely conforming to the County zoning; and

WHEREAS, the current and proposed zoning district is R-7, therefore, no zone change is necessary; and

WHEREAS, the annexation has been processed in accordance with the requirements of Metro 3.09 and has been reviewed for compliance with the Tigard Community Development Code and the Comprehensive Plan and the annexation substantially addresses the standards in Metro 3.09 regulating annexations; and

WHEREAS, the City Council has carefully considered the testimony at the public hearing and determined that withdrawal of the annexed properties from the applicable service districts is in the best interest of the City of Tigard.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The Tigard City Council hereby annexes the parcel described in the attached **Exhibit "A"** and shown in **Exhibit "B"** and withdraws said parcel from the Tigard Water District, the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District.

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor and posting by the City Recorder.

SECTION 3: The City Recorder is hereby directed to file certified copies of the Ordinance with Metro for administrative processing.

SECTION 4: Pursuant to ORS 222.120(5), the effective date of the withdrawal of the property from the Washington County Enhanced Sheriff's Patrol District, Washington County Urban Roads Maintenance District, Washington County Street Lighting District #1, Clean Water Services, and the Washington County Vector Control District shall be the effective date of this annexation.

SECTION 5: Pursuant to ORS 222.465, the effective date of the withdrawal of this property from the Tigard Water District shall be February 8, 2002.

SECTION 6: In accordance with ORS 222.180, the annexation shall be effective upon filing with the Secretary of State.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____ _____
City Attorney Date

EXHIBIT A

HARRIS - McMONAGLE ASSOCIATES INC.

ENGINEERS - SURVEYORS

12555 SW HALL BLVD.

TIGARD OREGON, 97223

TEL. (503) 639-3453 FAX. (503) 639-1232

LEGAL DESCRIPTION

FOR ANNEXATION TO THE CITY OF TIGARD

December 13, 2001 Revised

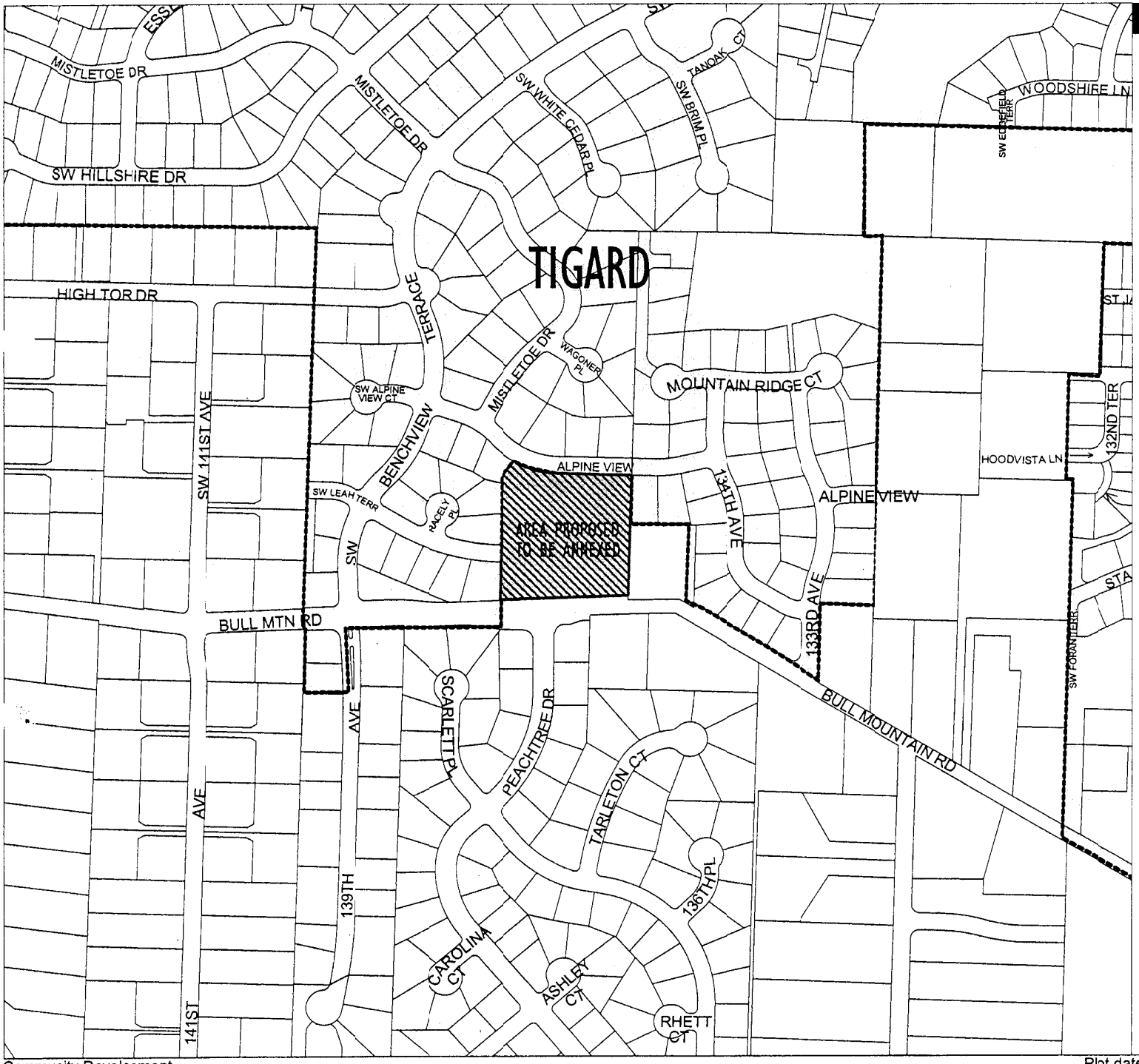
THE FOLLOWING DESCRIBED TRACT OF LAND BEING IN TITLE TO GEORGE MARSHALL RECORDED AS DEED No. 2000-048857, WHICH INCLUDES TRACT "C" AS SET FORTH IN THE DULY RECORDED PLAT OF "HILLSHIRE SUMMIT No. 2", AND BEING SITUATED IN THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 2-SOUTH, RANGE 1-WEST OF THE WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON.

BEGINNING AT THE NORTHWEST CORNER OF LOT 10 OF THE DULY RECORDED PLAT OF "THREE MOUNTAINS ESTATES"; THENCE ALONG THE WEST LINE OF SAID LOT 10 AND THE SOUTHERLY EXTENSION THEREOF S 00°01'20" E 386.26 FEET TO THE CENTERLINE OF SAW BULL MOUNTAIN ROAD; THENCE ALONG CENTERLINE S 86°16'44" W 375.07 FEET TO A POINT ON THE SOUTHERLY PROJECTION OF THE EAST LINE OF LOT 58, OF THE DULY RECORDED PLAT OF "HILLSHIRE SUMMIT No. 2"; THENCE ALONG THE SOUTHERLY PROJECTION AND EAST LINE OF LAST SAID PLAT, N 00°01'48" W 399.86 FEET TO AN ANGLE CORNER IN THE EAST LINE OF LOT 48, LAST SAID PLAT; THENCE ALONG THE EAST LINE OF SAID LOT 48, N 35°30'53" E 52.30 FEET TO THE SOUTHERLY 25 FOOT RIGHT OF WAY LINE OF S.W. ALPINE VIEW DRIVE; THENCE ALONG LAST SAID LINE ALONG THE ARC OF A 275.00 FOOT RADIUS CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 28°05'57" (THE CHORD OF WHICH BEARS S 76°02'56" E 133.52) AN ARC DISTANCE OF 134.87 FEET; THENCE S 89°54'06" E 214.37 FEET TO THE POINT OF BEGINNING.

CONTAINING: 3.16 ACRES, EXCLUSIVE OF EXISTING PUBLIC RIGHT OF WAY.

EXCEPTING FROM THE ABOVE DESCRIBED LAND THE AFORE MENTIONED TRACT "C" WHICH WAS PREVIOUSLY ANNEXED TO THE CITY OF TIGARD.

Exhibit B



CITY of TIGARD

GEOGRAPHIC INFORMATION SYSTEM

VICINITY MAP

ZCA2001-00002

DAFFODIL HILL ANNEXATION

N

0 200 400 600 Feet

1"= 476 feet

City of Tigard

Information on this map is for general location only and should be verified with the Development Services Division.
13125 SW Hall Blvd
Tigard, OR 97223
(503) 639-4171
http://www.ci.tigard.or.us

Community Development

Plot date: Nov 9, 2001; C:\magic\MAGIC03.APR

Agenda Item: _____

Hearing Date: **January 8, 2002 7:30 PM**

STAFF REPORT TO THE CITY COUNCIL FOR THE CITY OF TIGARD, OREGON

CITY OF TIGARD
Community Development
Shaping A Better Community

SECTION I. APPLICATION SUMMARY

FILE NAME: **DAFFODIL HILL ANNEXATION**

CASE NO.: **Zone Change Annexation (ZCA)** **ZCA2001-00002**

APPLICANT: George Marshall
PO Box 91249
Portland, OR 97291

OWNER: Same

PROPOSAL: To annex 1 parcel consisting of approximately 3.16 acres of land into the City of Tigard.

CURRENT ZONING DESIGNATION: R-7.

EQUIVALENT CITY ZONING DESIGNATION: R-7, Medium Density Residential. The R-7 zoning district is designed to accommodate attached single-family homes, detached single-family homes with or without accessory residential units, at a minimum lot size of 5,000 square feet, and duplexes, at a minimum lot size of 10,000 square feet. Mobile home parks and subdivisions are also permitted outright. Some civic and institutional uses are also permitted conditionally.

LOCATION: 13735 SW Bull Mountain Road; WCTM 2S109BA, Tax Lot 1400. The project is located on the north side of SW Bull Mountain Road and south of SW Alpine View.

APPLICABLE REVIEW CRITERIA: Community Development Code Chapters 18.320 and 18.390; Comprehensive Plan Policies 2 and 10; Metro Code Chapter 3.09; and ORS Chapter 222.

SECTION II. STAFF RECOMMENDATION

Staff recommends that the Council find that the proposed annexation will not adversely affect the health, safety and welfare of the City. Therefore, staff recommends **APPROVAL** of the annexation by adoption of the attached Ordinance.

SECTION III. BACKGROUND INFORMATION

Site information and proposal description:
The property is currently developed with a single-family residence. The applicant has obtained preliminary approval for an 18-lot subdivision named Daffodil Hill on the subject site. The site is located north of SW Bull Mountain Road and south of SW Alpine View. The site is surrounded by subdivisions that were developed for single-family housing and are situated on lots that are larger than those proposed in Daffodil Hill. There is an existing single-family home and a large barn located on the property. Both structures will be removed to accommodate the layout of the new proposed subdivision. The proposal is to annex approximately 3.16 acres of land into the City of Tigard with an assessed value of $474,000.

Vicinity Information:
The area to be annexed consists of 3.16 acres. The existing city boundary runs along the north and west property lines. The subject property and the property to the east are outside the Tigard city limits.

SECTION IV. APPLICABLE REVIEW CRITERIA AND FINDINGS

The relevant criteria in this case are Tigard Comprehensive Plan Policies 2.1.1, 10.1.1, 10.1.2, and; Tigard Community Development Code Chapter 18.320.

Staff has determined that the proposal is consistent with the relevant policies of the Comprehensive Plan based on the following findings:

Policy 2.1.1:
This Policy requires an ongoing citizen involvement program. The West CIT and surrounding property owners have been notified of the public hearing and notice of the hearing has been published in a newspaper of general circulation. The site has been posted since November 14, 2001, and the hearing was announced at the December Citizen Involvement meeting. There have been a number of opportunities for citizens to be involved in the decision making process.

Policy 10.1.1:
This Policy requires adequate service capacity delivery to annexed parcels. The City of Tigard Police, Engineering and Water Departments, Metro Area Communications, NW Natural Gas, Tualatin Valley Fire and Rescue, Tualatin Hills Park and Recreation District, and Clean Water Services have all reviewed the annexation request and have offered no objections. This policy has been complied with.

Policy 10.1.2:
This Policy pertains to boundary criteria for annexations and is satisfied. The property is adjacent to the Tigard city limits on the north and west boundaries, and is eliminating one lot that is currently a pocket of unincorporated Washington County surrounded by the City Limits.

Staff has determined that the proposal is consistent with the relevant portions of the Community Development Code based on the following findings:

<u>Section 18.320.020:</u> This Section addresses approval standards for annexation proposals and is satisfied because:

The applicable Comprehensive Plan Policies and Community Development Code provisions have been reviewed and satisfied as previously indicated in this report.

The property is currently zoned R-7. Because this property is in the Urban Services Area, the equivalent zoning has already been attached to the property, therefore, the property does not need to be rezoned upon annexation.

Metro 3.09 requires the additional standards to be addressed in annexation decisions, in addition to the local and state review standards. These are addressed and satisfied as discussed below:

Consistency with the directly applicable provisions in an urban service provider agreement or annexation plan adopted pursuant to ORS 195.065;

The processing has been done consistent with applicable Urban Service Provider agreements.

Consistency with directly applicable provisions of urban planning or other agreement, other than agreements adopted pursuant to ORS 195.065, between the affected entity and a necessary party;

The process required by the Development Code and Comprehensive Plan is consistent with the Urban Planning Agreement for annexations.

Consistency with specific directly applicable standards or criteria for boundary changes contained in comprehensive land use plans and public facility plans;

This has been discussed previously in this report and, as discussed, this criterion is satisfied.

Consistency with specific directly applicable standards or criteria for boundary changes contained in the Regional Framework Plan or any functional plans;

Because the Development Code has been amended to comply with applicable Metro functional plan requirements, by complying with the Development Code and Comprehensive Plan, the annexation is consistent with the applicable functional plan and the Regional Framework plan.

Whether the proposed changes will promote or not interfere with the timely, orderly and economic provisions of public facilities and services;

The proposed annexation will not interfere with the provision of public facilities or services because it is adjacent to existing City limits and services. Many services have been extended to that area as a result of earlier development.

If the proposed boundary change is for annexation of territory to Metro, a determination by Metro Council that the territory should be included in the Urban Growth Boundary shall be the primary criterion for approval;

The subject property is already within the Metro boundaries.

Consistency with other applicable criteria for the boundary change in question under state and local law.

Consistency with other applicable criteria has been discussed previously in this report.

SECTION V. OTHER STAFF COMMENTS

The City of Tigard Engineering, Building, Police Department, Tualatin Valley Fire and Rescue, Public Works, and Water Department have all reviewed this proposal and have offered no objections to annexation.

SECTION VI. AGENCY COMMENTS

Clean Water Services, Metro Area Communications, NW Natural Gas, Tigard School District, Beaverton School District, and Washington County have had the opportunity to review the proposal and have offered no objections.

BASED ON THE FINDINGS INDICATED ABOVE, PLANNING STAFF RECOMMENDS APPROVAL OF ZONE CHANGE ANNEXATION (ZCA) 2001-00002 – DAFFODIL HILL ANNEXATION.

PREPARED BY:	Brad Kilby Associate Planner	January 2, 2002 DATE
APPROVED BY:	Richard Bewersdorff Planning Manager	January 2, 2002 DATE

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Transportation System Plan

PREPARED BY: Julia Hajduk DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Should the Council adopt the Transportation System Plan and Comprehensive Plan changes proposed?

STAFF RECOMMENDATION

Adopt the Transportation System Plan and Comprehensive Plan changes by adopting the attached Ordinance.

INFORMATION SUMMARY

The City of Tigard began updating the Transportation System Plan (TSP) several years ago. With the help of a 12 member Task Force made up of the Planning Commission and 3 citizens, agencies, staff and the consulting firm DKS, a draft TSP was produced. The draft TSP takes into account existing traffic conditions in Tigard, community needs and goals and the anticipated future demands on the transportation system. The draft TSP was presented to the Citizen Involvement Team on November 3, 2000 and at a public meeting with the Planning Commission and TSP Task Force members on December 4, 2000. The Planning Commission held a public hearing on February 5, 2001 to consider the draft TSP and proposed Comprehensive Plan changes. At the close of the hearing, the Planning Commission voted to recommend approval of the TSP and proposed Comprehensive Plan changes with modifications addressed in the TSP comment log. A work session was held with the City Council on March 20, 2001 to answer questions and address comments. A second work session was held November 20, 2001 to update the Council on the TSP and to inform the Council about changes that were made to the draft TSP to respond to Council's previous comments. Staff also briefed Council on potential impacts associated with the adoption of the TSP.

Originally staff had planned on keeping a comment log to track changes which would be adopted with the draft TSP. On advice from the City Attorney's office, however, the consultant team went ahead and made all of the changes noted in the comment log so that Council can adopt the TSP as shown without having to refer to changes in the comment log. Staff has still provided the comment log for Council's reference and has created a new section for comments received after the updates were made (prior to November 20, 2001). The first section of the comment log and draft TSP have been updated to reflect the issues raised prior to the City Council work session on November 20, 2001. Attached is the proposed Ordinance, staff report, final draft TSP, proposed Comprehensive Plan changes and the comment log.

OTHER ALTERNATIVES CONSIDERED

Provide additional comments or changes to the TSP and/or Comprehensive Plan

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Transportation and Traffic, Goal #2 – Improve traffic flow.

ATTACHMENT LIST

Attachment: 1 – Draft Ordinance adopting the TSP and Comprehensive Plan.

Exhibits: 1 – Staff Report
2 – Final Draft Transportation System Plan
3 – Proposed Comprehensive Plan changes
4 – Comment log with all comments and responses to date.

FISCAL NOTES

N/A

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CITY OF TIGARD, OREGON

ORDINANCE NO. 02-_____

AN ORDINANCE ADOPTING THE TRANSPORTATION SYSTEM PLAN (TSP), AND AMENDING THE COMPREHENSIVE PLAN TO RELFECT THE UPDATED TSP.

WHEREAS, Metro Urban Growth Management Functional Plan Title 6 requires all local governments within its district, including the City of Tigard, to adopt certain transportation measures, including street connectivity requirements by August 2002; and

WHEREAS, state law requires the City to comply with Metro's Urban Growth Management Functional Plan Title 6; and

WHEREAS, the City Council has determined that it must comply with Metro transportation requirements, including minimum connectivity requirements; and

WHEREAS, the adoption of the TSP and changes to the Comprehensive Plan are the minimum necessary to comply with Metro's requirements; and

WHEREAS, the City Council has determined to be in compliance despite the risk that Ballot Measure 7 from the November, 2000, election may be found to have been constitutionally adopted, which would create the risk of Measure 7 claims against the City relating to implementation of the TSP; and

WHEREAS, the TSP was prepared with the help of a 12 member Task Force made up of the Planning Commission and 3 citizens, agencies, staff and the consulting firm, and

WHEREAS, the TSP was presented to the Citizen Involvement Team on November 3, 2000, and at a public meeting with the Planning Commission and TSP Task Force members on December 4, 2000, and

WHEREAS, the Planning Commission held a public hearing, which was noticed in accordance with the City standards, on March 20, 2001 and voted to recommend approval of the TSP and proposed Comprehensive Plan changes to the City Council, and

WHEREAS, the City Council held a public hearing on January 8, 2002, which was noticed in accordance with City standards, and voted to approve the TSP and Comprehensive Plan changes proposed, and

WHEREAS, the decision to adopt was based on compliance with Oregon Statewide Planning Goals #1, #2, #5, #6, #7, #8, #9, #10, #11 and #12; OAR 666-12; the Regional Transportation Plan, Comprehensive Plan policies 1.1.1, 2.1.1, 2.1.2, 2.1.3 and 8.1.1 through 8.1.8 and Community Development Code chapter 18.390.060 as detailed in the staff report (Exhibit 1)

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: The attached draft Transportation System Plan (Exhibit 2) and Comprehensive Plan changes (Exhibit 3) are adopted.

SECTION 2: If any section of the TSP or resulting Development Code changes trigger a Measure 7 claim, the City may make a determination regarding whether the TSP or Development Code provision should be applied on a case by case basis.

SECTION 3: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor, and posting by the City Recorder.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date

STAFF REPORT TO THE CITY OF TIGARD CITY COUNCIL

CITY OF TIGARD

SECTION I: APPLICATION SUMMARY

FILE NAME: TRANSPORTATION SYSTEM PLAN

CASES: **Comprehensive Plan Amendment** **CPA 2000-00003**

PROPOSAL: The proposal is to formally adopt the Transportation System Plan (TSP) that has been developed. As part of the adoption of the TSP, the Public Facilities Plan, Comprehensive Plan and Comprehensive Plan map will also be amended to incorporate a Master Transportation Plan for the next 20 years.

APPLICANT: City of Tigard
13121 SW Hall Boulevard
Tigard, OR 97223

LOCATION: The TSP goals and policies will be applicable to all areas within the City of Tigard.

APPLICABLE REVIEW CRITERIA: Oregon's Statewide Planning Goals 1, 2, 5, 6, 7, 8, 9, 10, 11, and 12; Oregon Administrative Rule 660-12; the Regional Transportation Plan (RTP), Comprehensive Plan Policies 1.1.1, 2.1.1, 2,1.2, 2.1.3, and 8.1.1 through 8.1.8, and Community Development Code Chapter 18.390.060.

SECTION II: RECOMMENDATION:

The Planning Commission held a hearing on February 5, 2001 and voted to forward a recommendation to the City Council to approve of the draft Transportation System Plan (TSP) and the proposed Comprehensive Plan changes based on the finding that all relevant criteria are satisfied.

SECTION III: BACKGROUND INFORMATION

The City of Tigard began the current Transportation System Plan (TSP) update in 1999. With the help of a 12-member Task Force made up of the Planning Commission and 3 citizens, agencies, staff and the consulting firm DKS, a draft TSP was produced. The draft TSP takes into account existing traffic conditions in Tigard, community needs and goals and the anticipated future demands on the transportation system. The draft TSP was presented to the Citizen Involvement Team (CIT) on November 3, 2000 and at a public meeting with the Planning Commission and TSP Task Force members on December 4, 2000. The Planning Commission held a public hearing on February 5, 2001 and voted to recommend approval of the TSP and proposed Comprehensive Plan changes. The Council was presented a copy of the Draft TSP at a meeting on October 17, 2000 and at a work session on March 20, 2001. At the March 20, 2001 work session, Council had several specific comments which have been reflected in the Final Draft TSP. A second work session was held with the City Council on November 20, 2001 to go over the changes that had been made and to provide an overview of major impacts of the proposed TSP.

The TSP is intended to address periodic review requirements of DLCD, as well as current requirements for Oregon Department of Transportation (ODOT) and Metro's Regional Transportation Plan (RTP).

SECTION IV: APPLICABLE REVIEW CRITERIA AND FINDINGS

Summary of Applicable Review Criteria

A. Community Development Code
- Section 18.390.060

B. Statewide Goals
- Citizen Involvement – Goal #1
- Land Use Planning - Goal #2
- Natural Resources - Goal #5
- Air, Water and Land Resources Quality - Goal #6
- Areas Subject to Natural Disasters and Hazards - Goal #7
- Recreation Needs - Goal #8
- Economic Development - Goal #9
- Housing - Goal #10
- Public Facilities and Services – Goal #11
- Transportation – Goal #12

C. Federal and State Statutes
- OAR 660

D. Comprehensive Plan Policies
- General Policies
- Citizen Involvement
- Transportation

A. COMPLIANCE WITH COMMUNITY DEVELOPMENT CODE SECTIONS:

<u>Procedures for Decision Making: Legislative:</u> Chapter 18.390 establishes procedures for consideration of legislative changes to the provisions of the Comprehensive Plan, implementing ordinances and maps. Section 18.390.060.G lists the factors upon which the Planning Commission and City Council shall base their decisions. The standards and responses are as follows:

1. The statewide planning goals and guidelines adopted under Oregon Revised Statutes Chapter 197.

These standards are addressed in Section IV-B under 'Statewide Goals' in this staff report.

2. Any federal or state statutes or guidelines found applicable.

The State's Transportation Planning Rule is addressed in Section IV-C under 'Compliance with Federal and State Statutes or Guidelines'.

3. Any applicable METRO regulations.

The draft TSP is consistent with the Regional Transportation Plan (RTP) which takes the place of Metro Functional Plan Title 6 (Regional Accessibility), and is consistent with Chapter 2 of the Regional Framework Plan. Representatives from Metro were provided an opportunity to review the Draft TSP and provided comments which have been addressed in the comment log. The comments were based on consistency with the RTP standards and recommendations. The comment log is attached to this report and the response shows that, where necessary, changes were made to the final draft TSP to be consistent with the RTP.

4. Any applicable comprehensive plan policies.

These standards are addressed in Section IV-D under 'Compliance with Comprehensive Plan Policies'.

5. Any applicable provisions of the City's implementing ordinances.

The implementing ordinances are contained in the Tigard Community Development Code, which are addressed in this section of the staff report. In addition, staff will return at a later date with proposed Development Code changes in order to fully implement the TSP and Comprehensive Plan changes being proposed. Staff anticipates having necessary development code changes ready for processing in April, 2002.

B. STATEWIDE GOALS

<u>Citizen Involvement</u>: Goal 1 requires a citizen involvement program that ensures the opportunity for citizens to be involved in the planning process.

Tigard Comprehensive Plan Policy 2.1.1 and Tigard Community Development Code Chapter 18.390 provide for citizen participation and notice. Notice of the Planning Commission hearing and City Council hearing was advertised in the local newspaper (Tigard Times). The draft plan was presented to the CIT on November 3, 2000 and at a public meeting with the TSP Task Force members on December 4, 2000. Notice was sent to Department of Land Conservation and Development in accordance with their notice requirements on August 22, 2000 and an updated notice was mailed in November 19, 2001. This goal is satisfied.

Land Use Planning: Goal 2 requires, in part, that adopted comprehensive plans be revised to take into account changing public policies and circumstances.

This goal is met because the City has applied all relevant Statewide Planning Goals, City Comprehensive Plan policies and Community Development Code requirements in the review of this proposal as discussed throughout this staff report. In addition, the TSP is consistent with the Regional Transportation Plan (RTP) and the Transportation Planning Rule (TPR).

Open spaces and natural resources: Goal 5 is intended to protect natural resources and conserve scenic and historic areas and open spaces.

The TSP shows future road alignments which will likely impact Goal 5 resources. The TSP, however, addresses the community and regional needs for transportation which, in turn supports other Planning Goals as discussed further in this report. In addition, there are City, Metro, State and Federal policies and procedures in place for protecting natural resources areas which will be complied with once detailed development plans are prepared. The proposed TSP and future implementation standards allow some flexibility in right of way width and alignments can be modified to minimize impact to resource areas where necessary. The TSP is consistent with the RTP which has been adopted by Metro to replace Title 6 of the Urban Growth Management Framework Plan (UGMFP). Metro has addressed Goal 5 in adoption of their plans as well. There are no inventoried historic sites which would be impacted by proposed road connections.

Air, Water and Land Resources Quality: Goal 6 is intended to maintain and improve the quality of air, water, and land resources of the state by controlling waste and process discharges.

The TSP provides a framework for multi-modal transportation systems which increases connectivity, reduces vehicle miles traveled and encourages pedestrian, bicycle and transit travel. By identifying future transportation needs and necessary improvements which include support of alternate forms of transportation, the City will be able to take steps toward improving quality of air, water and land resources. In addition, the functional classifications, proposed road widening, new connections and identified improvements support the existing land use designations and proposed Regional Center and Town Center. The mixed use nature of these areas also will help maintain and improve air, water and land resources quality by reducing vehicle trips, miles traveled, providing a denser development pattern thus maximizing land and providing a population density that supports alternate modes of transportation such as transit, bicycling and walking.

<u>Areas subject to Natural Disasters and Hazards</u>: Goal 7 is intended to protect life and property from natural disasters and hazards.

The City of Tigard has areas subject to flooding which may be impacted by future road connections. The City has standards in place, which would be utilized at the time of development, that regulate development of any kind in a flood plain area. The City's Comprehensive Plan has been acknowledged by DLCD and the Development Code implements the Comprehensive Plan. It should be stressed that any development, including road construction, will be required to show that it is not resulting in an increase in flood level by construction of the improvement. All new roads are required to be constructed in accordance with accepted standards regarding earthquake safety, slides, etc. Therefore, the improvements and road connections identified in the TSP are consistent with and compatible with Goal 7.

<u>Recreational Needs:</u> Goal 8 is intended to satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

The TSP includes a Pedestrian Master Plan and a Bicycle Master Plan which provide connections throughout the City as well as off-street paths for recreational uses. The proposed bicycle and pedestrian plans are consistent with the RTP and local and regional park plans. The proposed TSP is, therefore, consistent and compatible with Goal 8.

<u>Economic Development</u>: Goal 9 is intended to diversify and improve the economy of the state.

The functional classifications and identified improvements support the designated zoning, the Washington Square Regional Center and future Tigard Town Center. The zoning and densities are consistent with the Metro's UGMFP, 2040 Growth Concept and the RTP and have been acknowledged by DLCD through the acknowledgment of Metro's plans and the City's Comprehensive Plan. Providing a transportation system that will operate at acceptable levels, enables economic growth to continue in accordance with the City's and Region's vision. The proposed TSP and Comprehensive Plan amendments are, therefore, consistent with Goal 9.

<u>Housing:</u> Goal 10 is intended to provide for the housing needs of the citizens of the state.

The TSP and proposed Comprehensive Plan amendments provide for increased connectivity and more multi-modal access in residential areas. The TSP assumptions are based on Metro's growth projections for the area and identified strategies support the anticipated densities. As a result, the proposed TSP and Comprehensive Plan amendments are consistent with and compatible with Goal 10.

<u>Public Facilities and Services</u>: Goal 11 requires planning and development of a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for development. Required public facilities and services are to be provided at levels necessary and suitable for existing uses.

The provisions of the TSP support the existing land uses and development potential in the City of Tigard by providing for an efficient transportation system. After adoption of the TSP and Comprehensive Plan changes, necessary changes will be made to the Public Facilities Plan and CIP. The proposed TSP, therefore, complies with the Goal 11 requirements.

Transportation: Goal 12 requires a safe, convenient and economic transportation system.

The TSP has been prepared in accordance with the Statewide Planning Goals and requirements and will result in a less congested, safer and more orderly transportation system than would exist if no changes are made to the transportation system. The proposed Comprehensive Plan changes are intended to implement the TSP and provide an implementation strategy for the TSP component. Tigard's TSP is consistent with the RTP and has been reviewed by ODOT, Metro and DLCD. The TSP is consistent with Goal 12 requirements.

C. COMPLIANCE WITH FEDERAL AND STATE STATUTES OR GUIDELINES

Oregon Administrative Rule: Section 660-12-0000 through 0070 is intended to implement Statewide Planning Goal #12 by providing guidelines for local governments to demonstrate compliance with Goal #12 through their Transportation System Plans.

The draft TSP contains required elements listed as required in OAR 660-12-0020, OAR 660-12-0025, 660-012-0030, 660-012-0035, 660-012-0040, OAR 660-12-0050, and 660-012-0060. As part of the implementation of the TSP, staff is proposing Comprehensive Plan changes and will come back at a later date to make code changes in order to fully comply with OAR 660-012-0045. Staff is in the process of developing a work plan for processing development code changes and anticipates necessary changes being ready to process by April, 2002. Staff finds that the TSP complies with the State statutes. There are no specific federal standards that apply.

D. COMPLIANCE WITH COMPREHENSIVE PLAN POLICIES

General Policies: Policy 1.1.1(a) requires that legislative changes are consistent with statewide planning goals and the regional development plan.

The proposal is consistent with statewide planning goals as addressed above under 'Statewide Goals'. The proposal conforms with the Regional Transportation Plan which took the place of Title 6 of the Metro Functional Plan and is consistent with Chapter 2 of the Regional Framework Plan. This policy is satisfied.

Citizen Involvement: Policy 2.1.1 states that the City shall maintain an ongoing citizen involvement program and shall assure that citizens will be provided an opportunity to be involved in all phases of the planning process. Policy 2.1.2 states that opportunities for citizen involvement shall be appropriate to the scale of the planning effort. Policy 2.1.3 states that the City shall ensure that the information on planning issues is available in an understandable format.

A request for comments was sent to all City CITs, affected jurisdictions and agencies. The Planning Commission hearing was legally advertised with notice published in the Tigard Times on November 23, 2000 and notices of the hearing being continued to February 5, 2000 posted on all public entrances for one week prior to the continued meeting. In addition, the proposal was presented at the November 3, 2000 CIT meeting, and an informational public meeting was held on December 4, 2000 with the TSP Task Force. Notice of the January 8, 2002 City Council hearing to consider adoption was legally advertised in accordance with the requirements in the Development Code as well. This policy is satisfied.

Transportation: Transportation Policies 8.1.1 through 8.1.8 will be replaced with the updated policies in accordance with the Draft TSP.

The TSP is a comprehensive document which refines the existing comprehensive plan element on transportation. As part of the TSP adoption process, updated comprehensive plan changes are proposed to reflect the TSP findings and policies. Because the comprehensive plan is being updated to include the findings and strategies identified in the TSP this section is adequately addressed.

EXPLANATION OF ADDITIONAL OR REVISED COMPREHENSIVE PLAN LANGUAGE

Certain Comprehensive Plan language will require amendment or additional language to address the proposed goals and policies. Staff has prepared proposed language from the Comprehensive Plan sections that require amendment. Staff took the goals and policies from the TSP and inserted them under a new section of the Transportation chapter of the Comprehensive Plan. The new section is titled Transportation System and covers the policies and corresponding implementation strategies that allow the system as a whole to work efficiently and effectively. Implementation strategies were derived from the italicized portions in the TSP goals section which explain the intent or effect of the proposed policy itself. In some instances, policies were re-worded to reflect that the Comprehensive Plan is a policy document and not a regulatory document. It is the intent of staff to come back to the Planning Commission and City Council at a later date (anticipated for April, 2002) with specific code language intended implement the policies of the Comprehensive Plan. The implementation strategies will be utilized as a guide in the development code update process.

SECTION V: COMMENTS (AGENCY, STAFF AND OTHER)

Staff sent requests for comments to the following agencies and staff: City of Tigard Engineering, City of Tigard Operations, City of Tigard Police, Tualatin Valley Fire and Rescue, City of Beaverton, City of Durham, City of King City, Metro, ODOT, Washington County, Tigard-Tualatin School District, and Tri-met. Notice was also provided to DLCD and CIT contact members. Staff from the City and consulting team also attended the November 3, 2000 CIT meeting, held a public meeting with the TSP Task Force on December 4, 2000, and held a public hearing before the Planning Commission on February 5, 2001.

Staff has prepared a detailed comment log of all comments received from staff, agencies, citizens, other interested parties as well as comments from the Planning Commission and City Council.

PREPARED BY: Julia Hajduk, Associate Planner	December 10, 2001
APPROVED BY: Barbara Shields, Planning Supervisor	December 10, 2001 DATE

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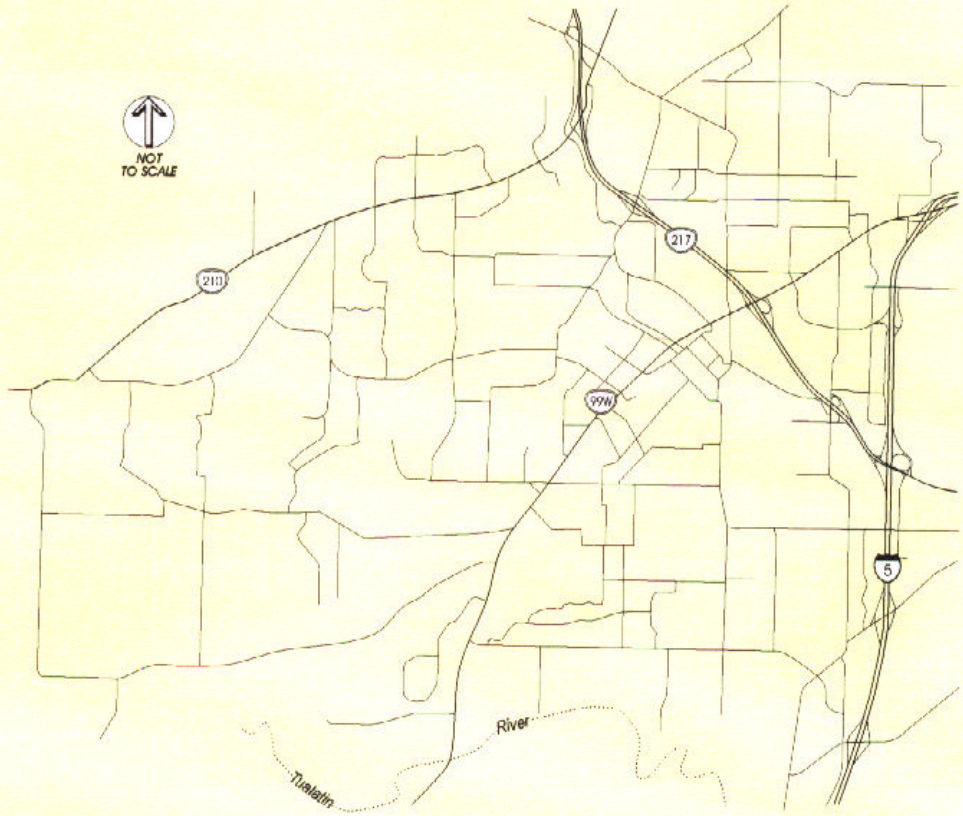
12/10/01 4:00PM

Tigard Transportation System Plan

Draft Report



Prepared for

CITY OF TIGARD

Prepared by

DKS Associates

October 2000

DKS Associates

1400 SW 5th Avenue, Suite 500
Portland, OR 97201
Phone: (503) 243-3500
Fax: (503) 243-1934

October 30, 2001

Julia Hajduk
City of Tigard
13125 SW Hall Boulevard
Tigard, OR 97223

Subject: Final DRAFT Tigard TSP Update P99161x0

Dear Julia:

DKS Associates is pleased to submit this Final Draft Transportation System Plan Update for the City of Tigard. This report reflects comments and revisions collected from the public, the Planning Commission and the City Council through workshops and open houses over the past year. The comment log that has been prepared provides additional detail in the response to questions which have been raised in review of the October 2000 draft of the TSP. It has been a pleasure assisting the City with the TSP project and we look forward to helping you with final adoption. Please call Julie Sosnovske, Chris Maciejewski or me with any questions regarding this report.

Sincerely,

DKS Associates
A Corporation

Ransford S. McCourt, P.E., P.T.O.E
Principal

REGISTERED PROFESSIONAL ENGINEER 13,230 OREGON MAY 22, 1990 R.S. McCOURT
Exp 12/31/01

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CITY OF TIGARD
OREGON

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CITY OF TIGARD
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LIST OF ACRONYMS / ABBREVIATIONS

- CBD – Central Business District
- D/C – Demand to Capacity Ratio
- DEIS – Draft Environmental Impact Study
- DEQ – Department of Environmental Quality
- ECO – Employee Commute Options
- FHWA – Federal Highway Administration
- HCM – Highway Capacity Manual
- ITS – Intelligent Transportation System
- LID – Local Improvement Districts
- LOS – Level of Service
- LRT – Light Rail Transit
- MSTIP – Major Streets Transportation Improvement Projects
- ODOT – Oregon Department of Transportation
- OHP – Oregon Highway Plan
- RLIS – Regional Land Information System
- ROW – Right of Way
- RTP – Regional Transportation Plan
- SDC – System Development Charges
- SOV – Single Occupancy Vehicle
- SPIS – Safety Priority Indexing System
- SPWF – Special Public Works Fund
- TAC – Technical Advisory Committee
- TAZ – Transportation Analysis Zone
- TDM – Travel Demand Management
- TGM – Transportation and Growth Management
- TIF – Traffic Impact Fee
- TPR – Transportation Planning Rule
- TSM – Transportation System Management
- TSP – Transportation System Plan
- V/C – Volume to Capacity Ratio
- VPD – Vehicles Per Day
- WACO – Washington County

Chapter 1: Summary
Tigard Transportation System Plan

Master Plan for the next 20 years

CITY OF TIGARD

OREGON

What is a TSP?

- Blue print for Transportation Investment
- Enables City to make prudent and effective choices regarding land use
- Coordination tool with regional and nearby agencies
- Fulfills State mandate (Goal 12) & RTP
- Addresses Existing and Future needs

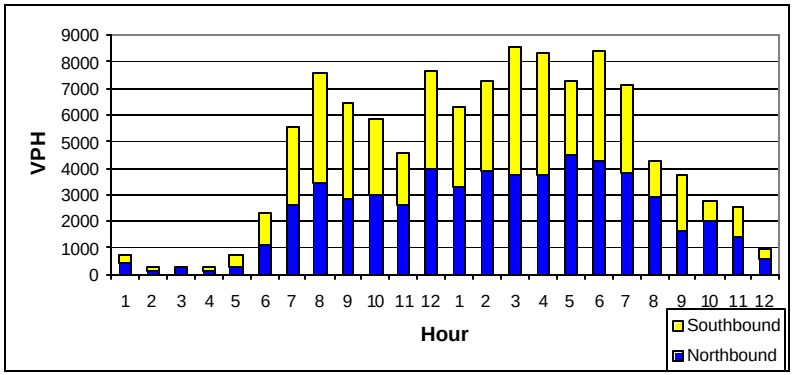
Why do a plan now?

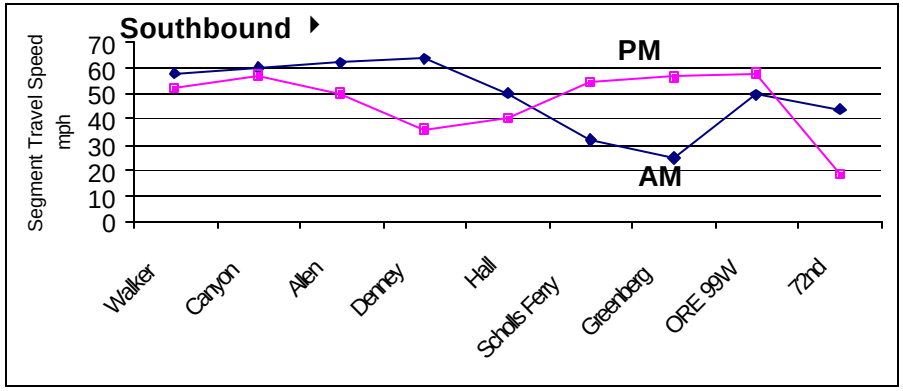
- **To get ready for the future - Now**
- **Growth**
  - Forecasts call for 6,000 more Dwelling Units and 15,000 more employees in the next 20 years
- **Metro RTP completed in 2000**
- **State Requirements (new highway plan)**
- **New Funding Opportunities**

Report Organization

- **Existing Conditions and Forecasting**
- **Policy**
- **Future Demand**
- **Modal Chapters**
  - Pedestrians, Bicycles, Transit, Motor Vehicles
  - Transportation Demand Management, Rail, Freight
- **Funding**

Existing Conditions



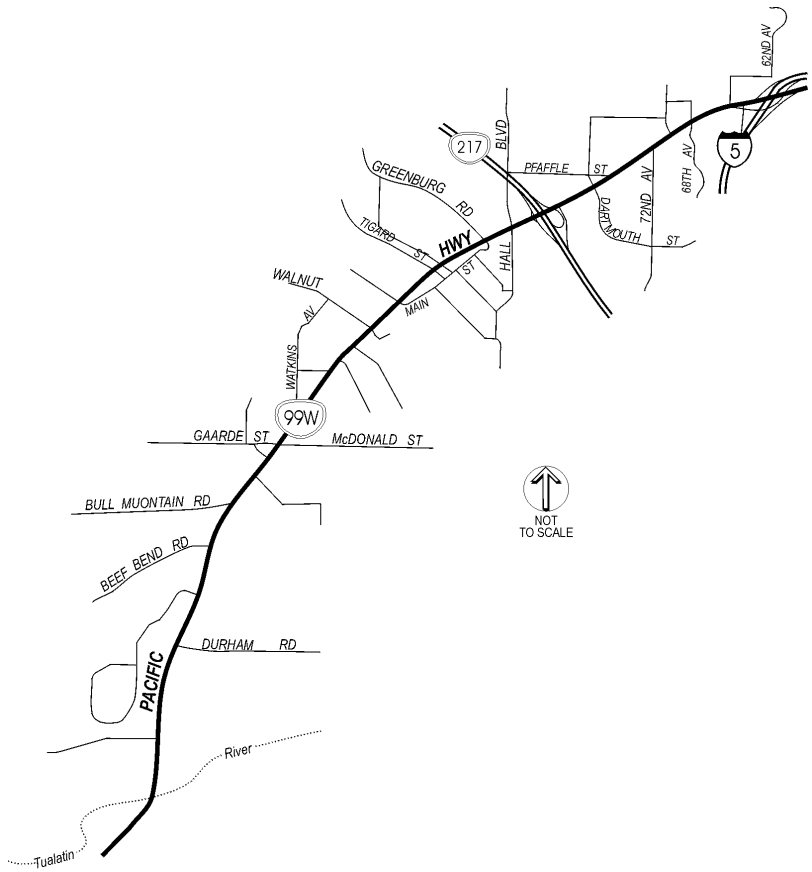


- City generates 35,000 PM hour vehicle trips
- ORE 99W and Scholls Ferry ~ 50,000 /day
- Much through traffic in Tigard
- It takes 5-20 minutes to get across Tigard
- Scholls Ferry has the highest collision rating
- 22 intersections near/at capacity in PM peak

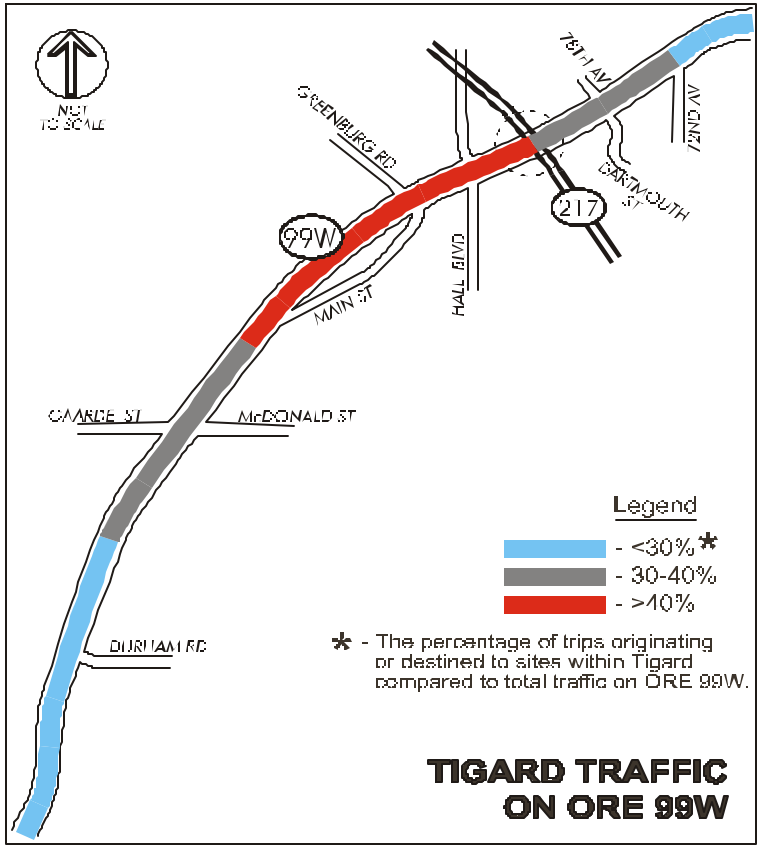
DKS Associates

Existing Conditions

- **Key bottlenecks today:**
  - ORE 99W/McDonald
  - ORE 99W/Hall-Greenburg
  - Hall/McDonald
  - Scholls Ferry/Nimbus
  - Scholls Ferry/Hall
  - I-5/Carman Interchange



Where Does Traffic on ORE 99W Go?



- **Throughout Tigard, ORE 99W carries about half Tigard traffic, half through traffic**
- **I-5 to ORE 217 linkage is significant**
- **No alternative route for corridor travel**

Existing Pedestrian/Bicycles

- **Bicycles**
  - No continuous network in Tigard
  - Peak bicycle volume in the 10 to 15 per hour range
  - Most bicycle lanes have been added in last 10 years
- **Pedestrian**
  - Significant gaps in sidewalk system
  - Few interconnected locations linking to schools, retail, parks, transit
  - Peak hour pedestrian volumes heaviest along ORE 99W
  - Most peak hour pedestrain volumes below 50 per hour

Existing Transit

- Significant bus service in Tigard
- 9,500 daily bus Tigard bus trips
- Transit Centers are most active transit stops in Tigard
- Western Tigard and north of Durham area only areas without quarter mile access to buses

TSP Task Force

- **Planning Commission**
- **Business / Chamber**
- **Bicycle / Transit involvement**
- **Technical Advisory Committee with local jurisdictions**

Transportation Goals

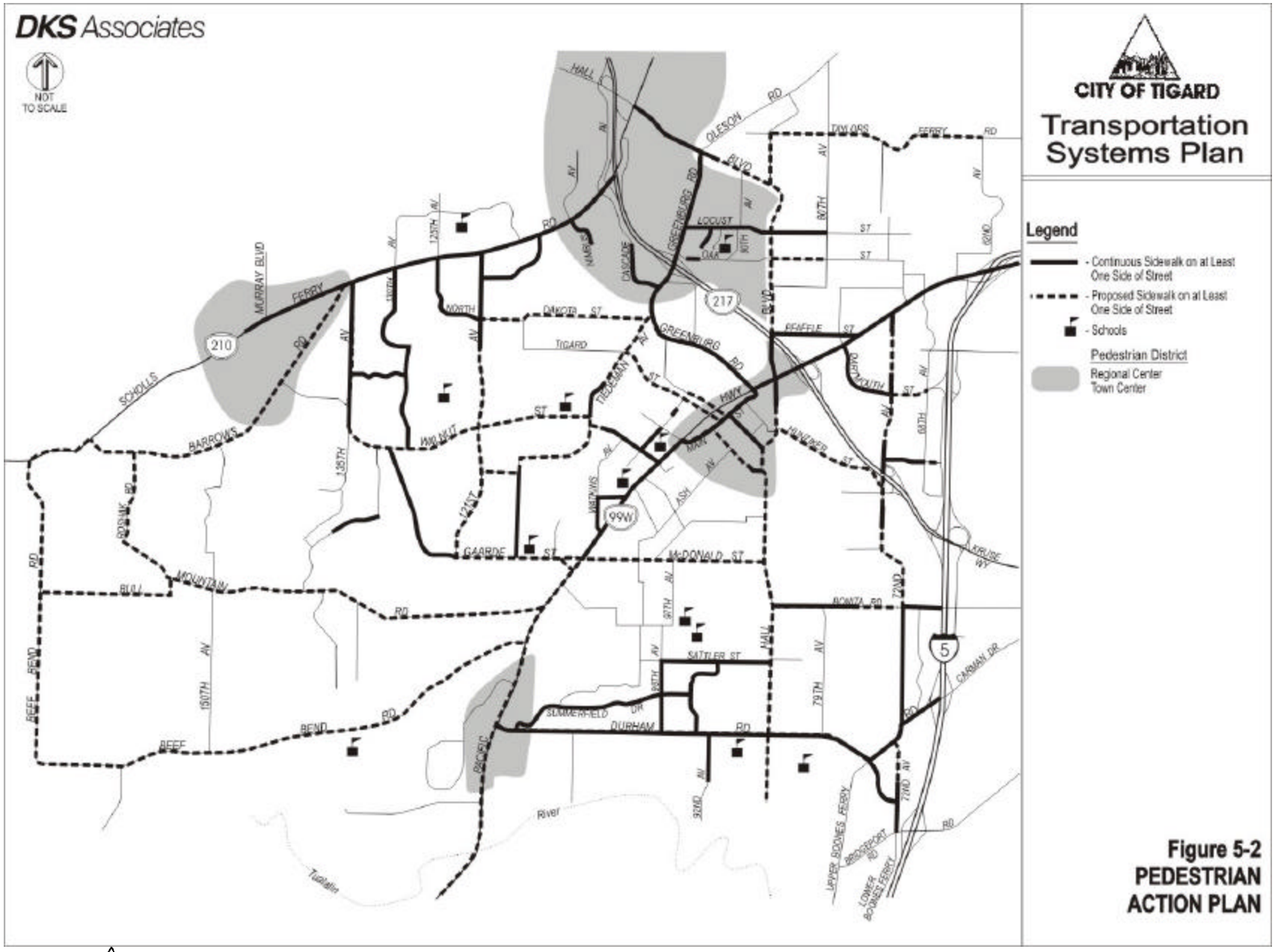
- **Livability**
- **Balanced Transportation System**
- **Safety**
- **Performance**
- **Accessibility**
- **Goods Movement**
- **Coordination**

Future Travel Forecast

- **Based upon regional travel modeling**
  - Assessed both 2015 and 2020 forecasts
- **Disaggregated Tigard into nearly 200 Transportation Analysis Zones**
- **Looked at build out condition in Tigard**
- **Established a modified 2015 forecast that resulted in 8% greater vehicle trip generation in Tigard than 2020**

Pedestrian Plan

- **Top Strategies**
  - Fill in gaps in network
  - Link to schools, parks, recreation, activity centers, transit
- **Establish Pedestrian Districts**
  - Regional Center
  - Town Centers
- **Minimum five feet**
- **Complimenting Land Use Actions**



CITY OF TIGARD
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Tigard
Transportation System Plan

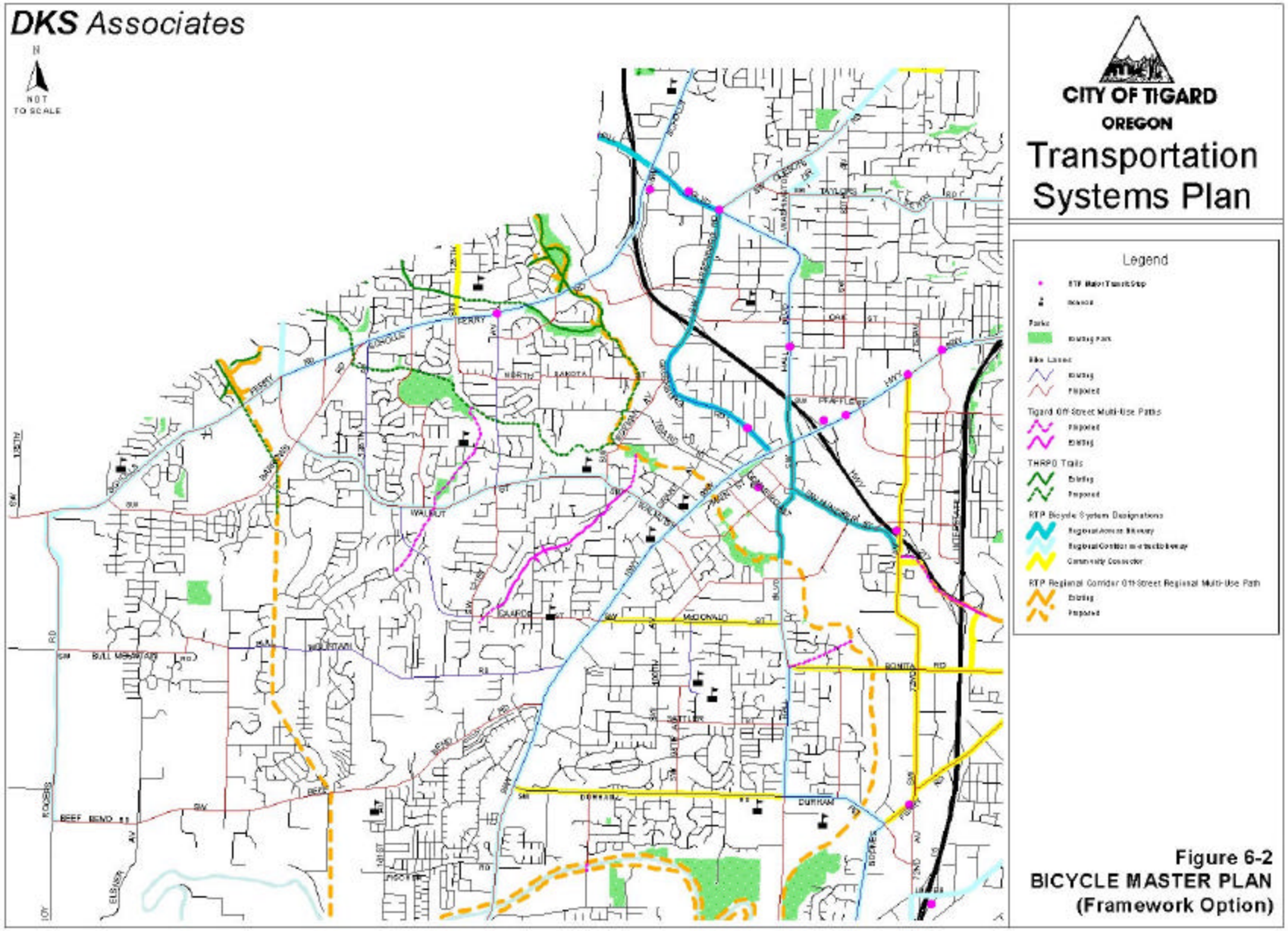
***DKS** Associates*

Pedestrian Action Plan Project List

Rank*	Project	From	To	Cost
H	North Dakota Street	121st Avenue	Greenburg Road	$230,000
H	McDonald Street	ORE 99W	Hall Boulevard	$200,000
H	Tiedeman Avenue	Walnut Street	Greenburg Road	$350,000
H	Oak Street (RTP 6019)	Hall Boulevard	80th Avenue	$500,000
H	ORE 99W	McDonald Street	South City Limits	$500,000
M	Bull Mountain Road	ORE 99W	Beef Bend Road	$1,200,000
M	Roshak Road	Bull Mountain Road	Scholls Ferry Road	$300,000
M	121st Avenue	Gaarde Street	North Dakota Street	$450,000
M	Hunziker Street	Hall Boulevard	72nd Avenue	$250,000
M	Washington Square Regional Center	Pedestrian Improvements (RTP 6022)		$6,000,000
L	Taylor's Ferry Rd	Washington Drive	62nd Avenue	$1,000,000
L	Washington Drive	Hall Boulevard	Taylor's Ferry Road	$200,000
			Subtotal	**$11,800,000**
Sidewalks to be built with Street Improvements				
H	Bonita Road	West of 72nd Avenue	72nd Avenue	$50,000
H	Walnut Street	135th Avenue	Tiedeman Avenue	$570,000
H	Gaarde Street	Walnut Street	ORE 99W	$620,000
H	Hall Boulevard	Scholls Ferry Road	Pfaffle Street	$1,000,000
H	Dartmouth Street	72nd	68th Avenue	$120,000
H	Tigard Street	115th Street	Main Street	$350,000
H	Burnham Street	Main Street	Hall Boulevard	$100,000
H	Fonner Street	walnut Street	121st Avenue	$250,000
H	Commercial Street	Main Street	Lincoln Street	$50,000
M	72nd Avenue	ORE 99W	Bonita Road	$1,200,000
M	Hall Boulevard	North of Hunziker Street	South City Limits	$670,000
M	Beef Bend Road	ORE 99W	Scholls Ferry Road	$1,000,000
M	Barrows Road	Scholls Ferry Road (W)	Scholls Ferry Road (E)	$950,000
L	72nd Avenue	Carman/Upper BoonesFry.	Durham Road	$250,000
			Subtotal	**$7,180,000**
	Annual Sidewalk Program at $50,000 per year for 20 years			**$1,000,000**
			Action Plan Total	**$19,360,000**

Bicycle Plan

- **Key Strategies**
  - Fill in gaps in bicycle network
  - Connect to key activity centers, schools, parks
- **Coordinated with adjacent jurisdictions**
- **Selected Framework Alternative**
- **Major Trails:**
  - Loop Fanno/Tualatin/Power
  - Tualatin River Crossing
  - Link to I-5/ORE 217 overcrossing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CITY OF TIGARD
OREGON
Transportation Systems Plan
Legend
Parks
Bike Lanes
Tigard Off-Street Multi-Use Paths
THRPD Trails
RTP Bicycle System Designations
RTP Regional Corridor Off-Street Regional Multi-Use Path
Figure 6-2
BICYCLE MASTER PLAN
(Framework Option)

Bicycle Action Plan Improvement List and Cost

RANK*	Project	From	To	Cost
H	Hunziker Street	Hall Boulevard	72nd Avenue	$250,000
H	Bonita Road	72nd Avenue	West of 72nd Ave.	$50,000
H	Burnham Street	Main Street	Hall Boulevard	$135,000
H	Oak Street (RTP 6019)	Hall Boulevard	90th Avenue	$300,000
H	98th Avenue	Murdock Stret	Durham Road	$275,000
H	92nd Avenue	Durham Road	Cook Park	$270,000
H	Tiedeman Avenue	Greenburg Road	Walnut Street	$250,000
M	121st Avenue	Walnut Street	Gaarde Street	$400,000
L	Taylor's Ferry Road	Washington Drive	City Limits	$500,000
L	Washington Drive	Hall Boulevard	Taylor's Ferry Rd	$100,000
L	O'Mara Street	McDonald Street	Hall Boulevard	$275,000
L	Frewing Street	ORE 99W	O'Mara Street	$150,000
			Subtotal	**$2,955,000**
H	Gaarde Street	Walnut Street	ORE 99W	$600,000
H	Hall Boulevard	Scholls Ferry Road	Locust Street	$500,000
H	Greenburg Road	Hall Boulevard	Cascade Avenue	$300,000
H	ORE 99W	East City Limits	South City Limits	$1,300,000
M	72nd Avenue	ORE 99W	South City Limits	$960,000
M	Hall Boulevard	Pfaffle Street	Bonita Road	$550,000
M	Carman Drive	I-5	Durham Road	$200,000
M	Walnut Street	ORE 99W	Barrows Road	$1,400,000
M	Barrows Road	Scholls Ferry Road (W)	Scholls Ferry Rd. (E)	$900,000
L	Bull Mountain Road	150th Avenue	Beef Bend Road	$550,000
L	Beef Bend Road	ORE 99W	Scholls FerryRd.	$1,600,000
			Subtotal	**$8,860,000**
Multi- Use Pathways				
H	Hunziker Link to LO	Linkage to Kruse Way Trail in Lake Oswego		$500,000
M	Fanno Creek Trail	Tualatin River to City Hall, ORE 99W to Tigard		$3,600,000
M	Tualatin River Trail	Adjacent to Cook Park from Powerlines to Fanno		$2,600,000
M	Tualatin River Crossing	Near 108th Avenue		$3,000,000
L	Powerlines Corridor	From Beaverton to Tualatin River Trail		$2,500,000
			Subtotal	**$12,200,000**
		Action Plan Total		**$24,015,000**

Transit Plan

- **Key Strategies**
  - Commuter Rail
  - Provide more frequent service, more hours of day
  - Express routes
  - Circulator Service in Tigard
  - Transit Amenities
- **New Transit Center at Murray/Scholls**
- **New Service Coverage: Durham/ Gaarde/Barrows/Bonita/Hall**
- **Complimentary Land Use Actions**
  - Transit Center/Rail Station Development

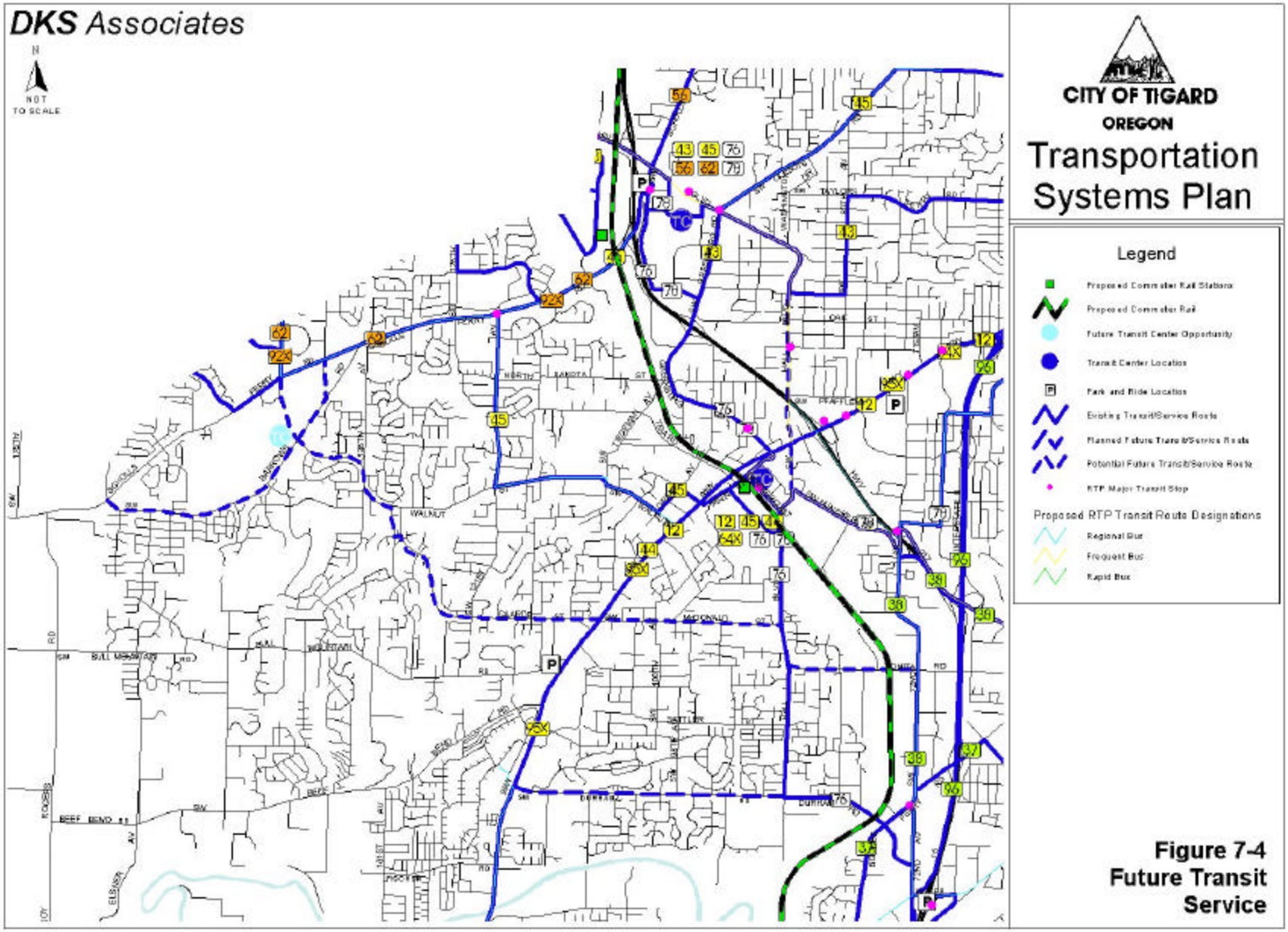


Figure 7-4
Future Transit Service

Motor Vehicle Plan

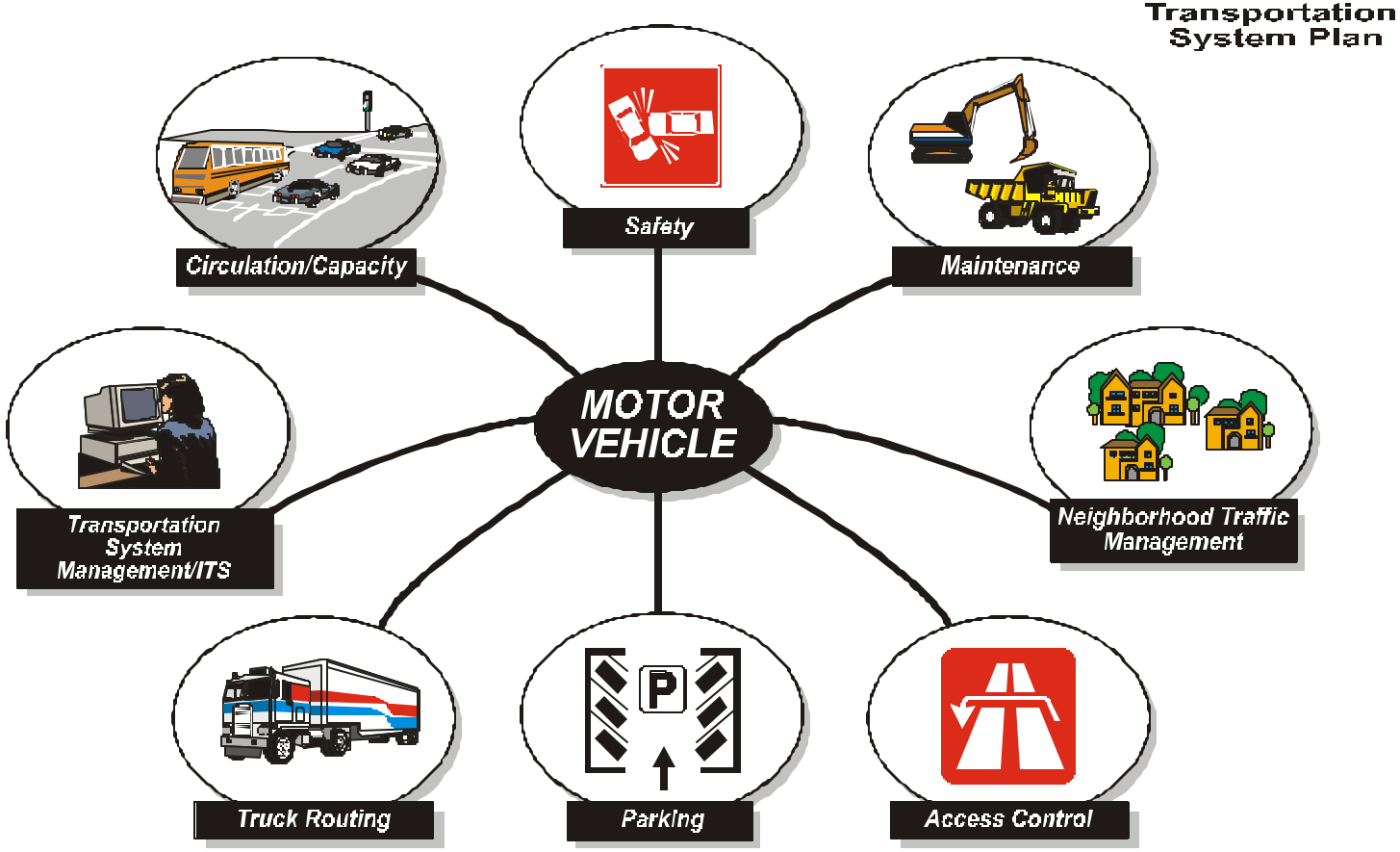
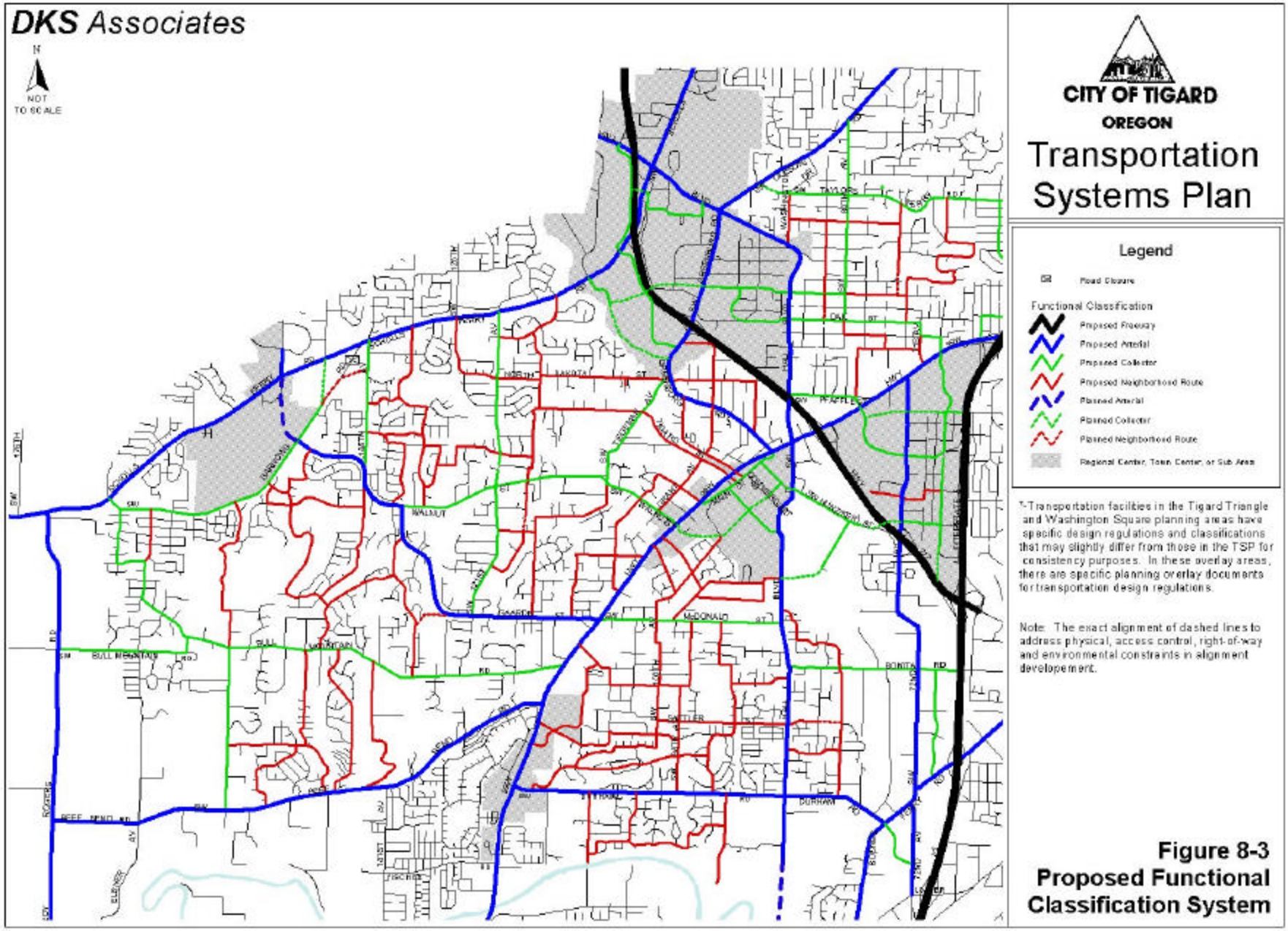


Figure 8-1
VEHICULAR ELEMENTS OF THE STREET PLAN

Functional Classification

CLASSIFICATION	EXAMPLE
• Freeways	• I-5/ORE 217
• Principal Arterials	• ORE 99W/Scholls
• Arterials	• Hall/Gaarde/Durham
• Collectors	• Walnut/Bull Mountain
• Neighborhood	• 130th/Watkins
• Local	• Cul-de-sacs/ redundant streets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CITY OF TIGARD
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Transportation Systems Plan
Legend
Road Closure
Functional Classification
Proposed Freeway
Proposed Arterial
Proposed Collector
Proposed Neighborhood Route
Planned Arterial
Planned Collector
Planned Neighborhood Route
Regional Center, Town Center, or Sub Area
*-Transportation facilities in the Tigard Triangle and Washington Square planning areas have specific design regulations and classifications that may slightly differ from those in the TSP for consistency purposes. In these overlay areas, there are specific planning overlay documents for transportation design regulations.
Note: The exact alignment of dashed lines to address physical, access control, right-of-way and environmental constraints in alignment developement.
Figure 8-3
Proposed Functional Classification System

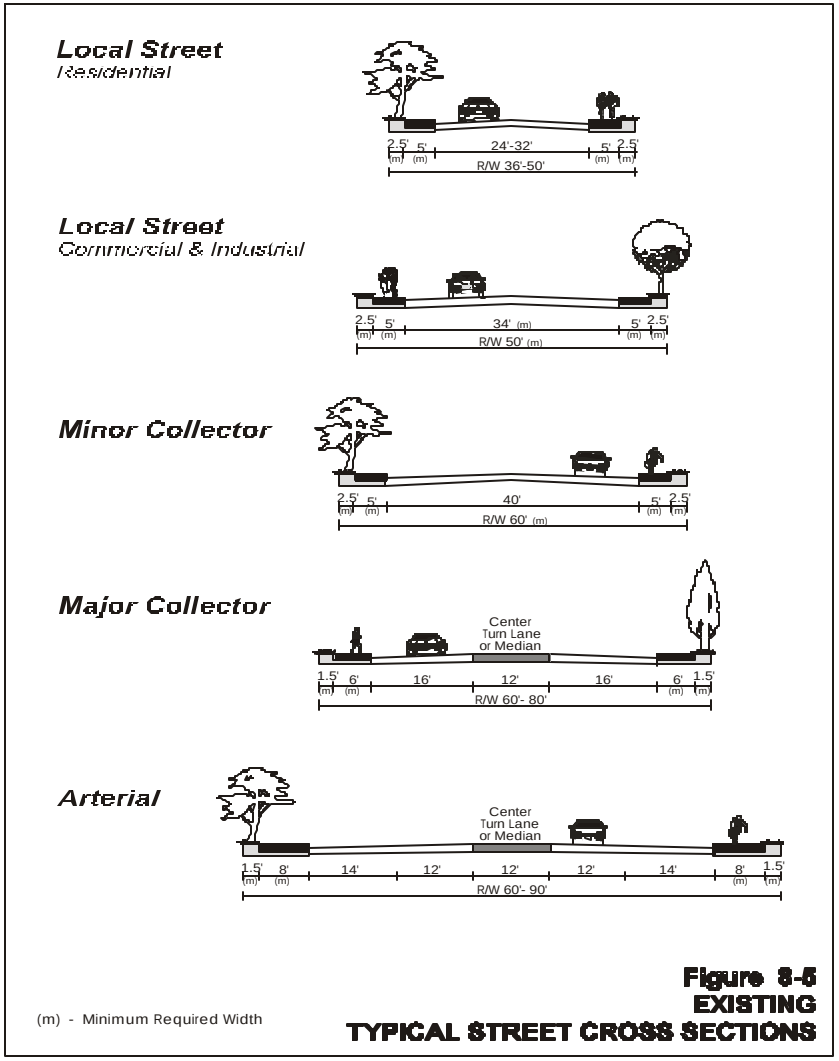


Figure 8-5
EXISTING
TYPICAL STREET CROSS SECTIONS

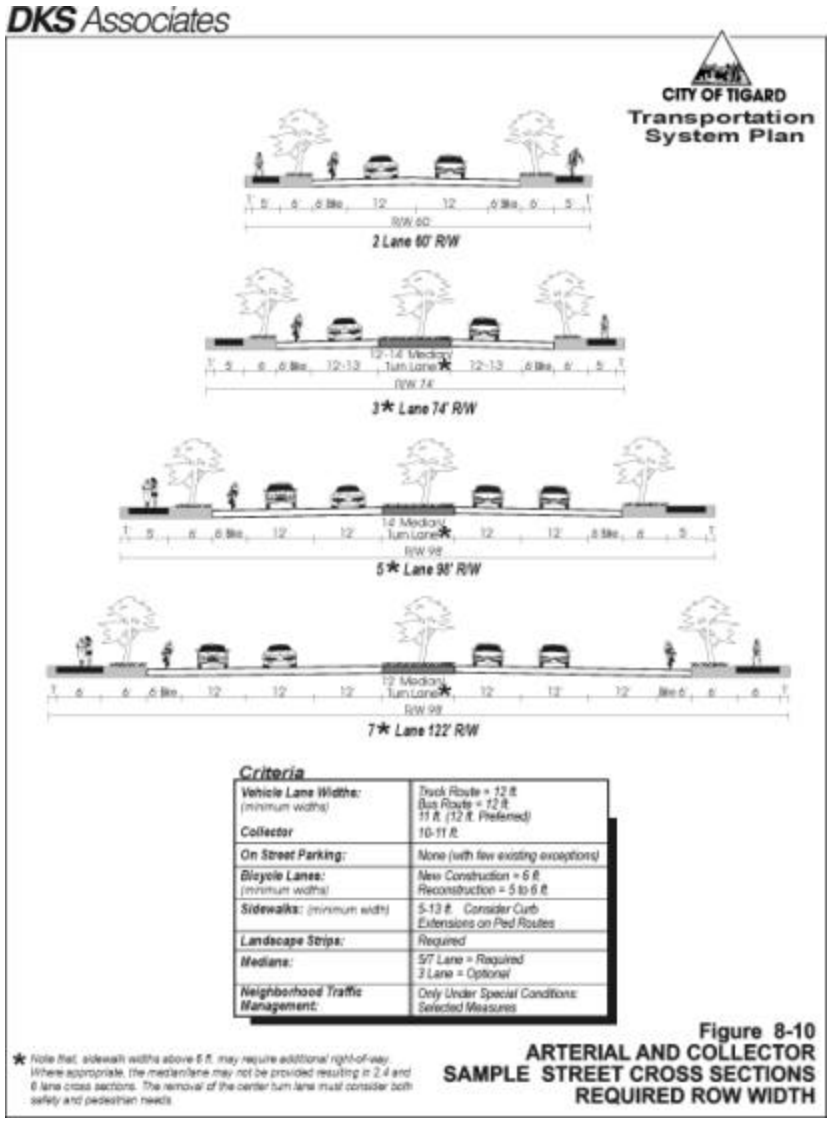


Figure 8-10
ARTERIAL AND COLLECTOR
SAMPLE STREET CROSS SECTIONS
REQUIRED ROW WIDTH

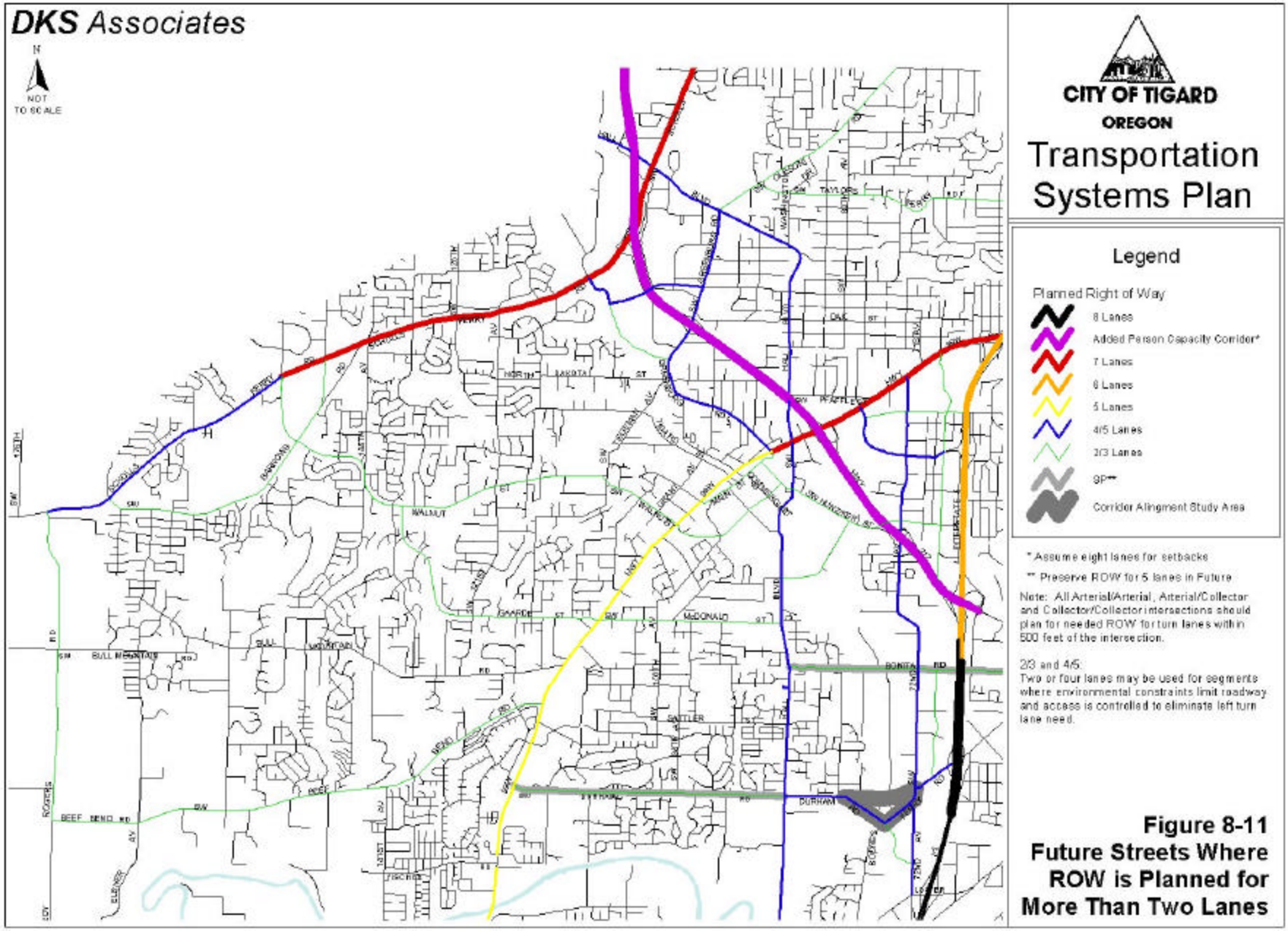
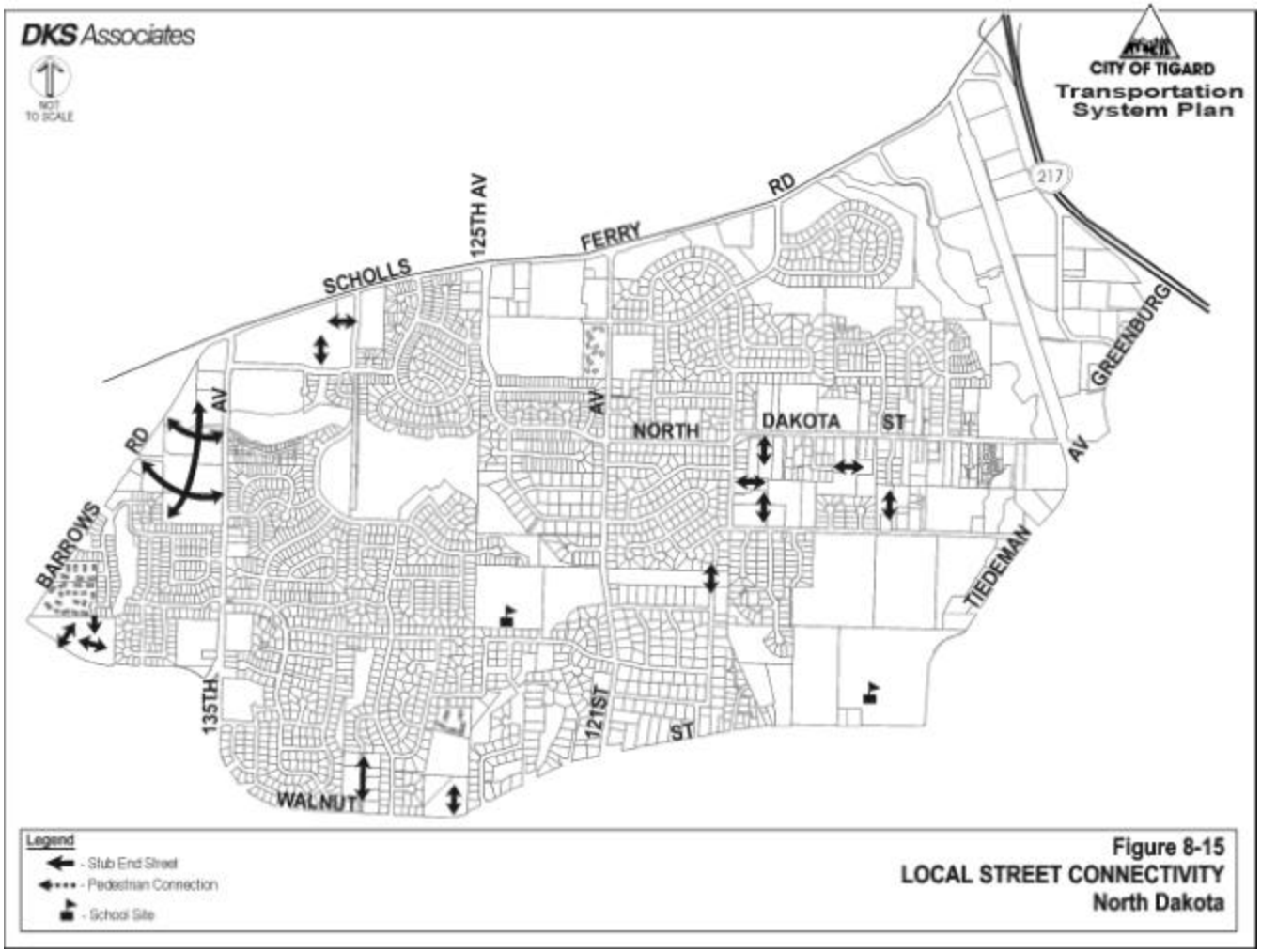


Figure 8-11
Future Streets Where ROW is Planned for More Than Two Lanes

Local Connectivity Plans

North Dakota Example



CITY OF TIGARD
OREGON

Tigard
Transportation System Plan

DKS *Associates*

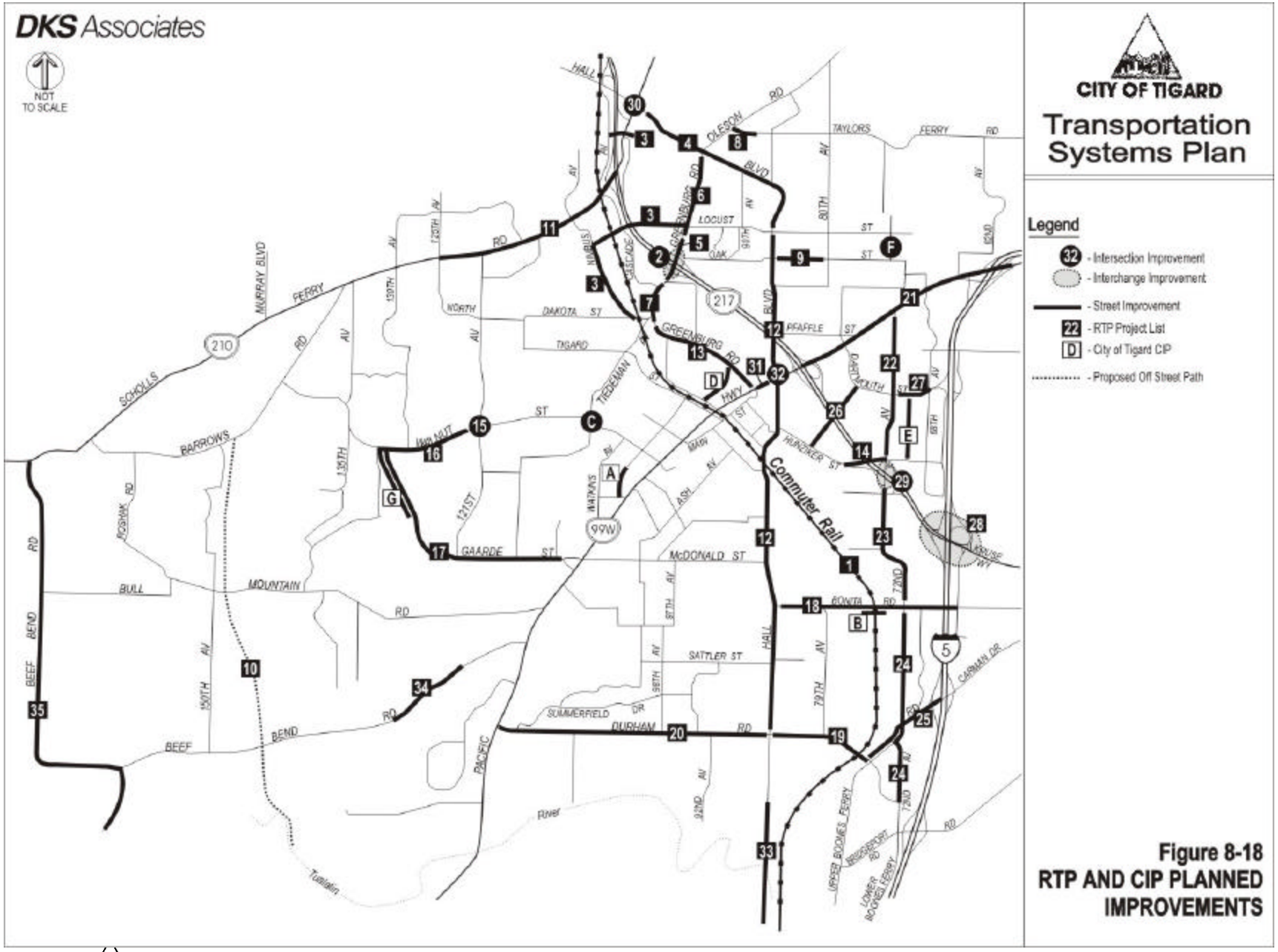
Capacity and Circulation

Key Issues

- **ORE 217 and I-5 are over capacity**
- **Tigard serves more ORE 99W through traffic in future**
- **ORE 99W fails in future**
- **Half of the traffic signalized intersection fail in 20 years assuming no improvements are made**

Key Solution Concepts for Tigard

- **Connectivity/Circulation Enhancement**
  - Washington Square
  - Tigard Triangle
  - Western Tigard
  - East/West
- **Traffic Operational Improvements**
  - Street Improvement Plan
  - Intersection capacity upgrades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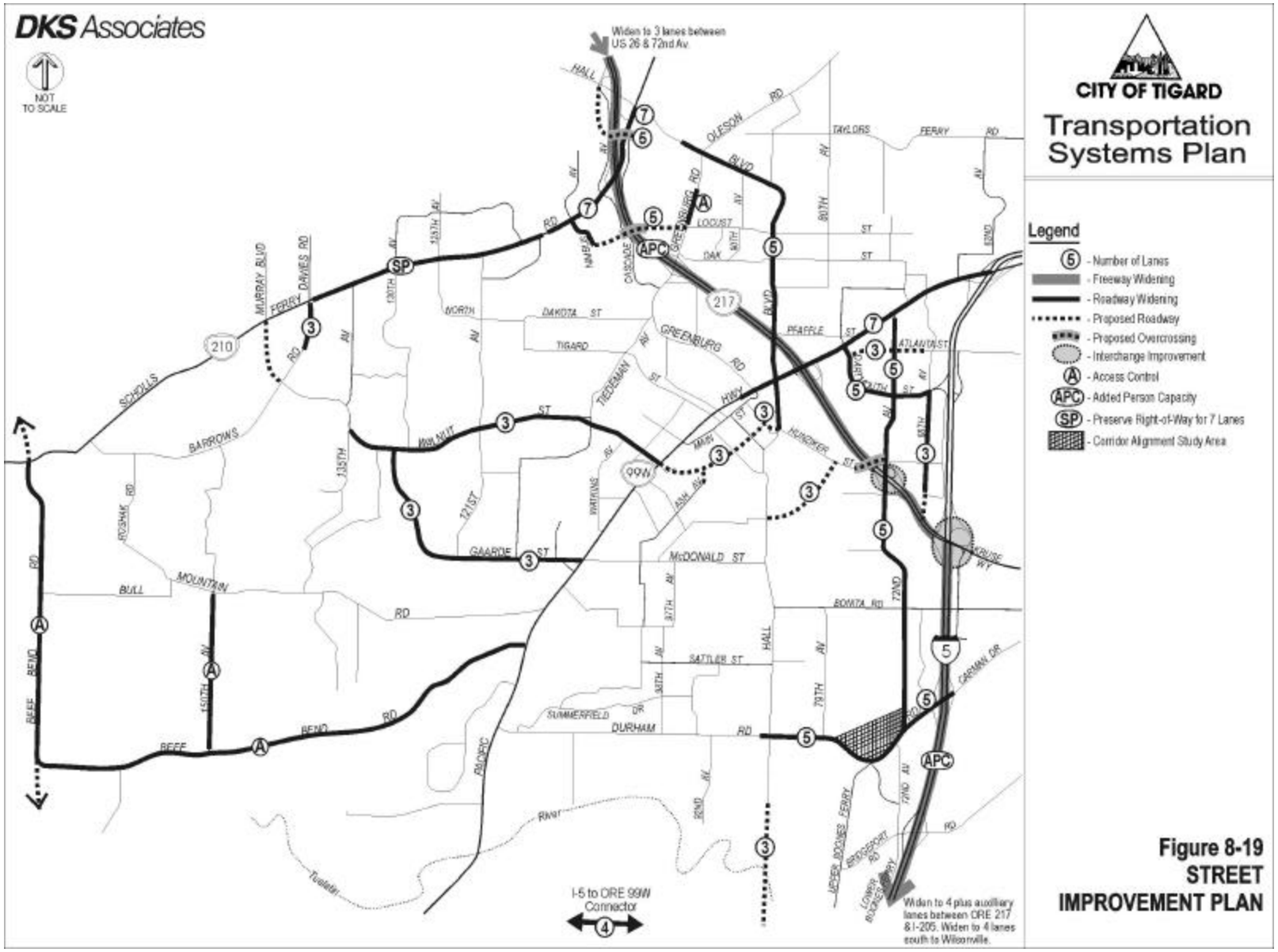
Transportation Systems Plan
Legend
- Intersection Improvement
- Interchange Improvement
- Street Improvement
- RTP Project List
- City of Tigard CIP
- Proposed Off Street Path
Commuter Rail
Figure 8-18
RTP AND CIP PLANNED IMPROVEMENTS



CITY OF TIGARD
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Tigard
Transportation System Plan

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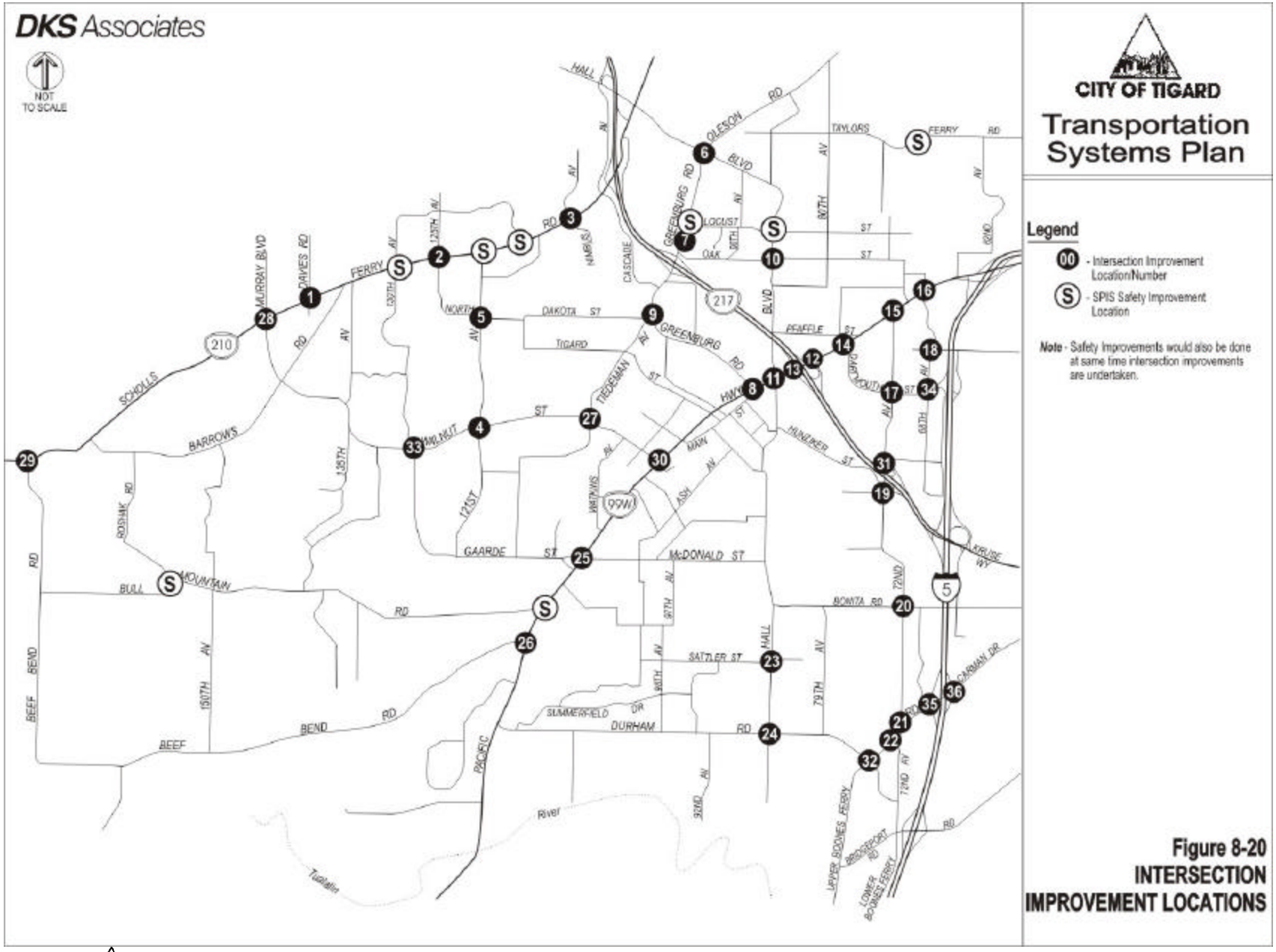


CITY OF TIGARD
OREGON

Tigard
Transportation System Plan

***DKS** Associates*

Recommendations in the following areas:

- **Traffic Signals**
  - Master Plan
  - Coordination
  - ITS
- **Safety**
  - Upgrade record keeping to focus on hot spots
- **Access Management**
  - ORE 99W
  - Beef Bend
  - 150th

More Motor Vehicle Recommendations

- **Maintenance**
  - Continue Pavement Management System
  - Fund program to get rid of pavement reconstruction backlog
- **Neighborhood Traffic Management (NTM)**
  - Continue current city program
  - Incorporate NTM into new land use/road approvals
- **Parking**
  - Metro Maximums already adopted into code
- **Intelligent Transportation Systems**

More Motor Vehicle Recommendations

- **Trucks**
  - Route map
  - Truck Friendly design
- **Key Implementation Items**
  - Access Spacing, Traffic Signal Spacing
  - Level of Service
  - Street spacing/local connections
  - Neighborhood Impact
  - School Access Impact
  - Mixed Use Determination

Other Modes in TSP

- Rail
- Air
- Water
- Pipeline
- Freight

TDM Plan

- Coordinate with Regional ECO programs
- Encourage the development of high speed communication to residents and businesses
- Mixed uses
- Park-and-ride

Preliminary Cost Summary

Modes	20 year Costs
Motor Vehicle: ODOT	$900 M
Motor Vehicle: City	$250 M
Maintenance	$45 M
Commuter Rail	$75 M
Bicycle	$25 M
Pedestrian	$13 M

Why are these estimates so large?

Motor Vehicle

- **Significant new roadway connections and widenings**
- **Major regional needs in the vicinity of Tigard**

Ped/Bike/Transit

- **Commuter Rail**
- **Significant right-of-way and topography to establish bike lanes and sidewalks**
- **Lack of on-going programs for sidewalks,TDM, Traffic Signals**

Potential Transportation Funding

- **Over 20 years current programs would only fund $250,000,000**
- **Substantial shortfall due to regional nature of improvements**
- **Key sources of future funds:**
  - Bond Measures (local, MSTIP, regional)
  - Increase existing fees commensurate with needs (SDC)
  - Focus on high priority needs
  - Exactions
  - Roadway pricing

Steps Taken So Far to Get Here

- **TSP Task Force Approved TSP Spring 2000**
- **Planning Commission Approved TSP Winter 2000**
- **CIT & Public Open Houses- Nov 2000**
- **City Council Workshops- Nov 2000, March 2001, November 2001**
- **City Council Adoption - Early 2002**

How Can Your Comments be heard?

- **Comment on specific details of the draft plan and provide recommendations**
- **Attend hearings**
- **Review report on the web (www.ci.tigard.or.us)**
- **Call (639-4171), write or email the City**
- **Julia Hajduk (julia@ci.tigard.or.us)**
- **Gus Duenas (gus@ci.tigard.or.us)**

Chapter 2
Goals and Policy

CITY OF TIGARD
OREGON

BACKGROUND

These goals and policies have been developed to guide the City's twenty year vision of transportation system needs. They are intended to replace the current transportation related goals and policies in the Tigard Comprehensive Plan (these can be found in the appendix of this report). Additionally, they build upon material developed in the visioning process from January, 1998[1]. State Transportation Planning Rule, Metro Functional Plan guidelines and the past comprehensive plan call for a more comprehensive and balanced approach to transportation policy, addressing walking, bicycling, transit, rail, truck and other modes as well as automobile travel.

These goals and policies are a result of widespread technical work by staff, Tigard Planning Commission, a Technical Advisory Committee and the consultant. Using input from the Planning Commission regarding their likes/dislikes about transportation in Tigard, goals and policies were developed.

The City of Tigard Draft Transportation System Plan (TSP) Goals and Policies consist of seven goals with related policies organized under each goal. The goals are simple, brief guiding statements which describe a desired result. The policies focus on how goals will be met by describing the types of actions that will contribute to achieving the goal. Figure 2-1 provides an outline of the relationship between goals, policies, actions and implementation. This Transportation System Plan addresses the top three elements identified in Figure 2-1. The existing City of Tigard goals in the Comprehensive Plan have been incorporated into these Goals and Policies, reflecting other regional policy from the state, region and adjacent jurisdictions.

Below many of the policies, the italic text represents a detailed description about the intent of the policy. While the italics provide the intent of the policy, they are not implementable as a land use action without inclusion in land use regulations.[2] The Draft TSP Goals and Policies are linked to mode maps provided in the City of Tigard TSP. The TSP includes master plan maps for motor vehicles, pedestrians, bicycles, transit and other modes.

In addition to the transportation related goals and policies, the goals & policies related to other elements of the Tigard Comprehensive Plan were reviewed in terms of both transportation and land use. Several modifications to these policies in other elements are also recommended.

---

1 *Tigard Beyond Tomorrow*, Community Vision—1st Annual Report, January, 1998.

2 ORS 197.175(2); ORS 197.195(1).

CITY OF TIGARD
Transportation System Plan

From Vision to Action
Tigard Transportation System Plan

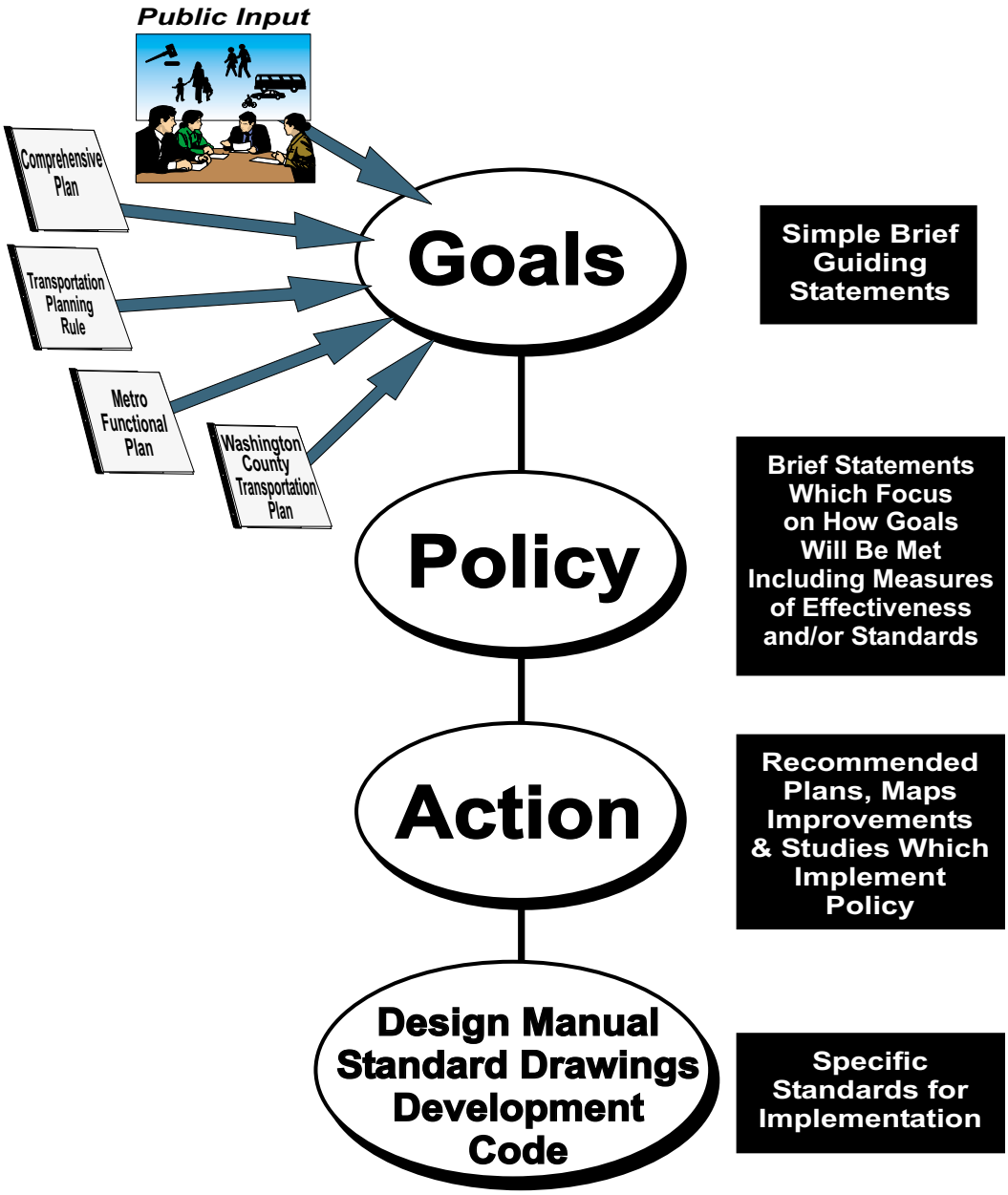


Figure 2-1
GOALS AND POLICIES RELATIONSHIP

GOALS AND POLICIES

Goal 1—Livability

Plan, design and construct transportation facilities in a manner which enhances the livability of Tigard.

Policy 1 Maintain the livability of Tigard through proper location and design of transportation facilities.

Design streets and highways to respect the characteristics of the surrounding land uses, natural features, and other community amenities.

Policy 2 Encourage pedestrian accessibility by providing safe, secure and desirable pedestrian routes.

The City will develop and maintain a pedestrian plan in Tigard, outlining pedestrian routes. Sidewalk standards will be developed to define various widths, as necessary, for City street types.

Policy 3 Address issues of excessive speeding and through traffic on local residential streets through a neighborhood traffic program. The program should address corrective measures for existing problems and assure that development incorporates traffic calming.

Develop and maintain a program of street design standards and criteria for neighborhood traffic management (NTM) for use in new development and existing neighborhoods. Measures to be developed may include (but not limited to) narrower streets, speed humps, traffic circles, curb/sidewalk extensions, curving streets, diverters and/or other measures, as developed as part of a City NTM plan.

Goal 2—Balanced Transportation System

Provide a balanced transportation system, incorporating all modes of transportation (including motor vehicle, bicycle, pedestrian, transit and other modes).

Policy 1 Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use.

Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truck facilities in Tigard.

Policy 2 The City shall coordinate with Tri-Met, and/or any other transit providers

serving Tigard, to improve transit service to Tigard. Fixed route transit will primarily use arterial and collector streets in Tigard. Development adjacent to transit routes will provide direct pedestrian accessibility.

The Regional Transportation Plan (RTP) and Tri-Met service plans will be the guiding documents for development of Tigard's transit plan. The City should provide input to Tri-Met regarding their specific needs as they annually review their system. This input should focus on improving service (coverage and frequency) to underserved areas. New transit service should be considered concurrent to street improvements when significant street extensions are completed. The City should encourage land intensive uses to locate near transitways and require high intensity uses (i.e. large employment, commercial sites) to provide transit facilities When bus stops reach 75 boardings per day, bus shelters should be considered in development review. Sidewalks should be available within ¼ mile from all transit routes and transit should be provided to schools and parks.

Policy 3 Bicycle lanes must be constructed on all arterials and collectors within Tigard consistent with the Bicycle Master Plan (with construction or reconstruction projects). All schools, parks, public facilities and retail areas shall have direct access to a bikeway.

The City will develop a bicycle plan which connects key activity centers (such as schools, parks, public facilities and retail areas) with adjacent access. Standards for bicycle facilities within Tigard will be developed and maintained. Where activity centers are on local streets, connections to bicycle lanes shall be designated.

Policy 4 Sidewalks must be constructed on all streets within Tigard (with construction or reconstruction projects). All schools, parks, public facilities and retail areas shall have direct access to a sidewalk.

The City will develop a pedestrian plan which connects key activity centers with adjacent access. Standards for pedestrian facilities within Tigard will be developed and maintained.

Policy 5 Bicycle and pedestrian plans shall be developed which link to recreational trails.

The bicycle and pedestrian plans will need to indicate linkages between recreational and basic pedestrian networks. A primary facility in Tigard should link together Fanno Creek, Tualatin River and the BPA right-of-way in the west of Tigard. Design standards for recreational elements will need to be developed and maintained.

Policy 6 Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections.

[3] *Planning and Design for Transit Handbook*, Tri-Met, January, 1996.

The purpose of this policy is to provide accessibility within Tigard, with a focus on pedestrian connectivity. Pedestrian connectivity can be provided via pedestrian/bike paths between cul-de-sacs and/or greenways where auto connectivity does not exist or is not feasible. Wherever necessary, new streets built to provide connectivity shall incorporate traffic management design elements, particularly those which inhibit speeding. As a planning standard, require local streets to have connections every 530 feet in planning local and neighborhood streets.

Policy 7 Tigard will participate in vehicle trip reduction strategies developed regionally targeted to achieve non-single occupant vehicle levels outlined in Table 1.3 of the Regional Transportation Plan.

DEQ and Metro have developed regional policies regarding trip reduction. Some of these policies are aimed at provision of parking and others are aimed at ridesharing (Employee Commute Options—ECO rules).

Policy 8 Tigard will support the development of a commuter rail system as part of the regional transit network.

Tigard will support development of a commuter rail system connecting the south Metro area to the Beaverton/Hillsboro area, with stop(s) in Tigard.

Goal 3—Safety

Strive to achieve a safe transportation system by developing street standards, access management policies and speed controls when constructing streets, by making street maintenance a priority and through a comprehensive program of engineering, education and enforcement.

Policy 1 Design of streets should relate to their intended use.

A functional classification system shall be developed for Tigard which meets the City's needs and respects needs of other agencies (Washington County, Metro, ODOT). Appropriate design standards for these roadways will be developed by the appropriate jurisdiction.

Policy 2 Street maintenance shall be a priority to improve safety in Tigard.

The City shall place a high priority on routine street maintenance to preserve its infrastructure investment.

Policy 3 Safe and secure pedestrian and bikeways shall be designed between parks and other activity centers in Tigard.

Policy 4 Safe and secure routes to schools shall be designated for each school and any new residential project shall identify the safe path to school for children.

Working with the school district, citizens, and developers, the City should undertake a process of defining school routes.

Policy 5 Access management standards for arterial and collector streets shall be developed to improve safety in Tigard.

Guidelines will be developed to provide access control standards. These standards shall be applied to all new road construction and new development. For roadway reconstruction, existing driveways shall be compared with the standards and a reasonable attempt shall be made to comply (consolidating driveway accesses or relocating driveways to a lower classification street are examples).

Policy 6 Establish a City monitoring system that regularly evaluates, prioritizes and mitigates high accident locations within the City.

Review traffic accident information regularly to systematically identify, prioritize and remedy safety problems. Working with the County, develop a list of high collision sites and projects necessary to eliminate such problems. Require development applications to identify and mitigate for high collision locations if they generate 10% increase to existing traffic on an approach to a high collision intersection. Washington County's SPIS (Safety Priority Indexing System) could be used as a basis for determining high collision locations.

Policy 7 New roadways shall meet appropriate Lighting Standards. Existing roadways shall be systematically retrofitted with roadway lighting.

Priority locations for roadway lighting include paths to schools, parks, and town center areas. Local property owners fund lighting districts.

Policy 8 New development shall be required to provide safe access and to gain access from a publicly dedicated street (i.e. dedicate right-of-way, if not already on a public street in rough proportionality to the development's impact) and provide safe access.

Development will be required to provide right-of-way (if needed) and safe access as determined by application of the City's development code and standards for design. The minimum City standards must be met for half-street adjacent to developing property for a development to proceed. This policy applies to both pedestrians and motor vehicles.

Goal 4—Performance

Transportation performance measures shall be set and maintained by the City.

Policy 1 A minimum intersection level of service standard shall be set for the City of Tigard. All public facilities shall be designed to meet this standard.

Level of service E (and demand-to-capacity ratio of 1.0 or less), Highway Capacity Manual, Chapters 15, 16, and 17 (or subsequent updated references) is recommended to balance provision of roadway capacity with level of service and funding. ODOT, Metro and Washington County performance standards should be considered on state or county facilities and for 2040 Concept Areas (as defined in Table 1.2 of the Regional Transportation Plan). Monitor Metro and Washington County's current work to develop a

level of service standard.. The City will work to make the arterial & collector street system operate effectively to discourage "cut-through" traffic on neighborhood and local streets.

Policy 2 Parking ratios shall be set to provide adequate parking, while providing an incentive to limit the use of the single occupant vehicle.

Parking standards shall be listed in the development code for the City of Tigard. DEQ and Metro Functional Plan Title 2 encourages lower parking ratios to encourage use of alternative modes (walking, biking, transit, car pooling, etc.).

Policy 3 Work with other transportation providers in Washington County, including Tri-Met, Metro and ODOT to develop, operate and maintain intelligent transportation systems, including coordination of traffic signals.

Goal 5—Accessibility

Develop transportation facilities which are accessible to all members of the community and minimize out of direction travel.

Policy 1 Design and construct transportation facilities to meet the requirements of the Americans with Disabilities Act.

Policy 2 Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

Work toward the eventual connection of streets identified on the plan as development occurs, as funds are available and opportunities arise. As a planning guideline, require residential streets to have connections every 530 feet for local and neighborhood streets.

Policy 3 Work with Washington County and ODOT to develop an efficient arterial grid system that provides access within the City, and serves through City traffic.

As outlined in Title 6 of the Metro Urban Growth Management Functional Plan, access connection standards will be developed. The arterial street system should facilitate street and pedestrian connectivity.

Goal 6—Goods Movement

Provide for efficient movement of goods and services.

Policy 1 Design arterial routes, highway access and adjacent land uses in ways that facilitate the efficient movement of goods and services.

Policy 2 Require safe routing of hazardous materials consistent with federal and state guidelines.

Work with federal agencies, the Public Utility Commission, the Oregon Department of Energy and ODOT to assure consistent laws and regulations for the transport of hazardous materials.

Goal 7—Coordination

Implement the Transportation System Plan (TSP) in a coordinated manner.

Policy 1 Coordinate and cooperate with adjacent agencies (including Washington County, Beaverton, Tualatin, Lake Oswego, City of Portland, Tri-Met, Metro and ODOT) when necessary to develop transportation projects which benefit the region as a whole in addition to the City of Tigard.

Maintain plan and policy conformance to the Regional Transportation Plan and Transportation Planning Rule (OAR 660-012). Seek compatibility with all adjacent county and city jurisdiction plans.

OTHER PLANS

The relationship of the TSP to other regional planning documents can be puzzle of acronyms, activities and plans. Figure 2-2 summarizes the transportation planning puzzle, identifying where the Tigard TSP fits within the on-going regional context of planning. Many of the most common planning initiatives and terms are reduced to acronyms, which are summarized below:

TPR - Transportation Planning Rule, Statewide Planning Goal 12 developed by Department of Land Conservation and Development (DLCD) to guide transportation planning in Oregon.

OTP - Oregon Transportation Plan, a federally mandated plan developed by Oregon Department of Transportation (ODOT) to guide statewide transportation development. Consists of several modal plans, developed separately.

OHP – 1999 Oregon Highway Plan, defines policies and investment strategies for Oregon's state highway system for the next 20 years. It further refines the goals and policies of the Oregon Transportation Plan and is part of Oregon's Statewide Transportation Plan. Standards for access management on state highways is clearly defined as adopted May 1999.

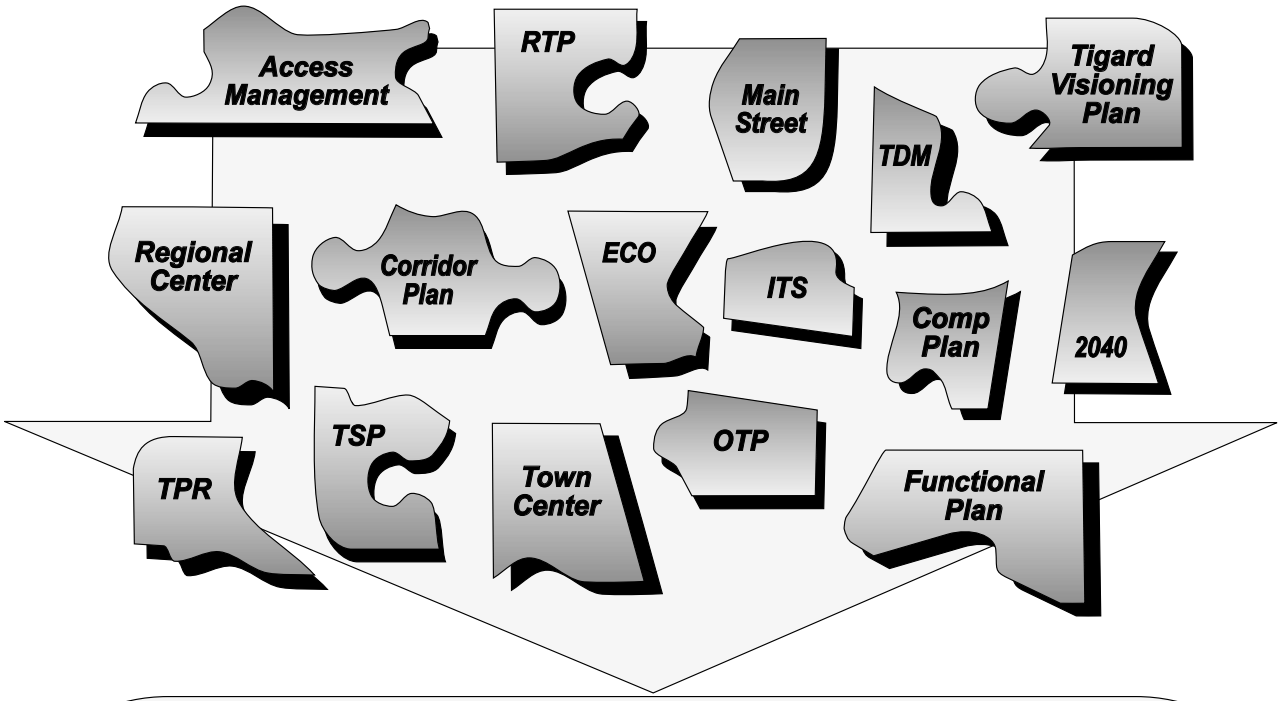
RTP - Regional Transportation Plan, developed by metropolitan planning organizations (MPO) to guide regional transportation investment, required to secure federal funding. In Portland this task is performed by Metro (Metropolitan Service District). Adopted August 10, 2000.

TSP - Transportation System Plan, a requirement of the TPR for cities and counties in Oregon to guide local transportation decisions and investments. (ORS 660-012-0015(3)).

Corridor Plan - ODOT transportation plans which focus on state transportation corridors to specifically outline needs, modes, strategies and effective investment.

City of Tigard Transportation Puzzle

CITY OF TIGARD
Transportation System Plan



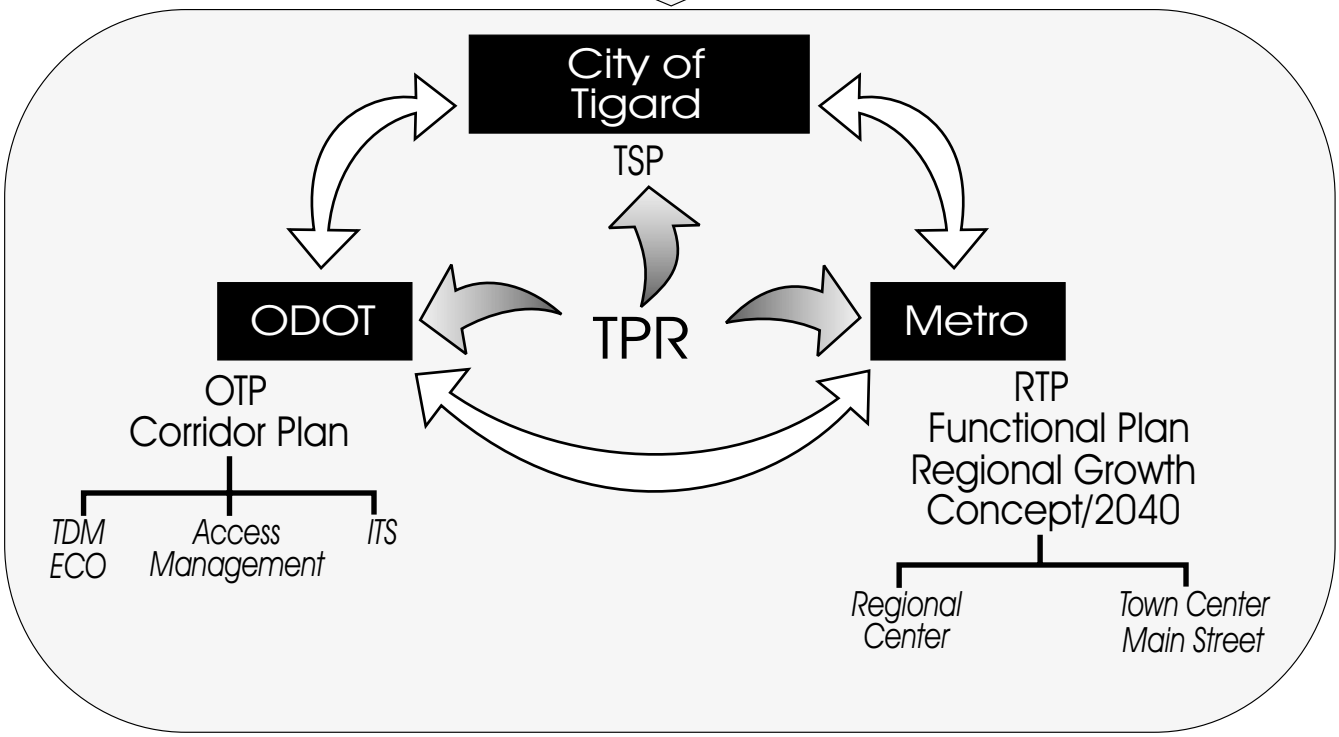


Figure 2-2
RELATIONSHIP OF TSP TO REGIONAL PLANNING

DKS Associates

Access Management - Methods to address improved safety and performance of state highways through control of access commensurate with facility needs.

ITS - Intelligent Transportation Systems. Use of advancing technology to improve movement of people and goods safely.

TDM - Transportation Demand Management. An element of the TSP, that includes a series of actions to reduce transportation demand during peak periods.

ECO - Employee Commute Options. An urban area TDM program required by Department of Environmental Quality (DEQ) of employers of 50 or more persons to reduce vehicle trips.

Functional Plan – A Metro adopted plan (November 21, 1996, updated September, 1998) which outlines mandatory criteria for evaluating transportation systems and land use, translating state and regional policy to local requirements necessary to implement the 2040 planning effort. Title 2 and Title 6 require that the City adopt changes to its land use regulations to address parking ratios, connectivity and level of service. Superceded by the Regional Transportation Plan.

Tigard Comprehensive Plan – This plan is a strategy to guide the City in the conservation, protection and development of the City of Tigard.

2040 - A long range effort directed by Metro to explore the choices for growth in the next 50 years and defining performance standards for local government to implement the regional growth concept. It defines several development types which will create higher density population and employment centers in the region. They are as follows:

- **Regional Center:** Compact centers of employment and housing served by high quality transit. They will become the focus of transit and highway improvements. Washington Square is identified as a regional center.
- **Town Center:** Provides for localized services within a 2-3 mile radius, with a community identity. There is a town center identified in the Main Street area and another identified near the intersection of ORE 99W and Durham Road.
- **Station Areas:** Development centered on LRT or high capacity transit, accessible by all modes.
- **Main Street:** Similar to town centers, an area with a traditional commercial identity, but smaller in scale, along a street with good transit services
- **Corridors:** Development along a primary and frequent transit corridor that encourages mixed use and pedestrian access to transit. ORE 99W, Scholls Ferry Road and Hall Boulevard have been identified as corridors in Tigard.

Chapter 3
Existing Conditions

This chapter summarizes existing traffic and transportation conditions in the City of Tigard. The focus is on motor vehicle, transit, pedestrian, bicycle and truck facilities. To understand existing travel patterns and conditions, a variety of aspects of the city's transportation system were considered. In the fall of 1994, an inventory of traffic conditions in Tigard was undertaken to establish a base year for all subsequent analysis. As refinements have been made to the regional land use forecasts over the past five years, conditions have changed. Current, up-to-date counts were conducted in 1997 and again in 1999 at many of the same intersections and at some additional intersections. This data collection update provides a unique opportunity to look at intersection level growth trends within the City over a period of approximately five years. Updated counts were conducted only at intersections, however, the remaining data summarized in this chapter would still apply to current conditions, including relative variation among routes, peaking characteristics, speed zones, high accident locations, bus routes, etc.

The following sections briefly describe existing roadway functions, circulation, traffic speeds and volumes and levels of service in the Tigard transportation system as well as existing pedestrian, bicycle and transit facilities.

STREET NETWORK

The Transportation Planning Rule requires that classification of streets within the City be provided. [1] The classification must be consistent with state and regional transportation plans for continuity between adjacent jurisdictions. The City of Tigard has an existing street classification system. This system is shown in Figure 3-1.[2] The number of lanes on roadways in Tigard are shown in Figure 3-2. Existing typical street cross-sections are shown in Figure 3-3.

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1 *Transportation Planning Rule*, State of Oregon, Department of Land Conservation and Development, Section 660-12-020(2)(b), May 1991 (updated November, 1998).

2 *Comprehensive Plan: Transportation Map*, City of Tigard, Ordinance No. ORD-91-13, Map adopted June 11, 1991.

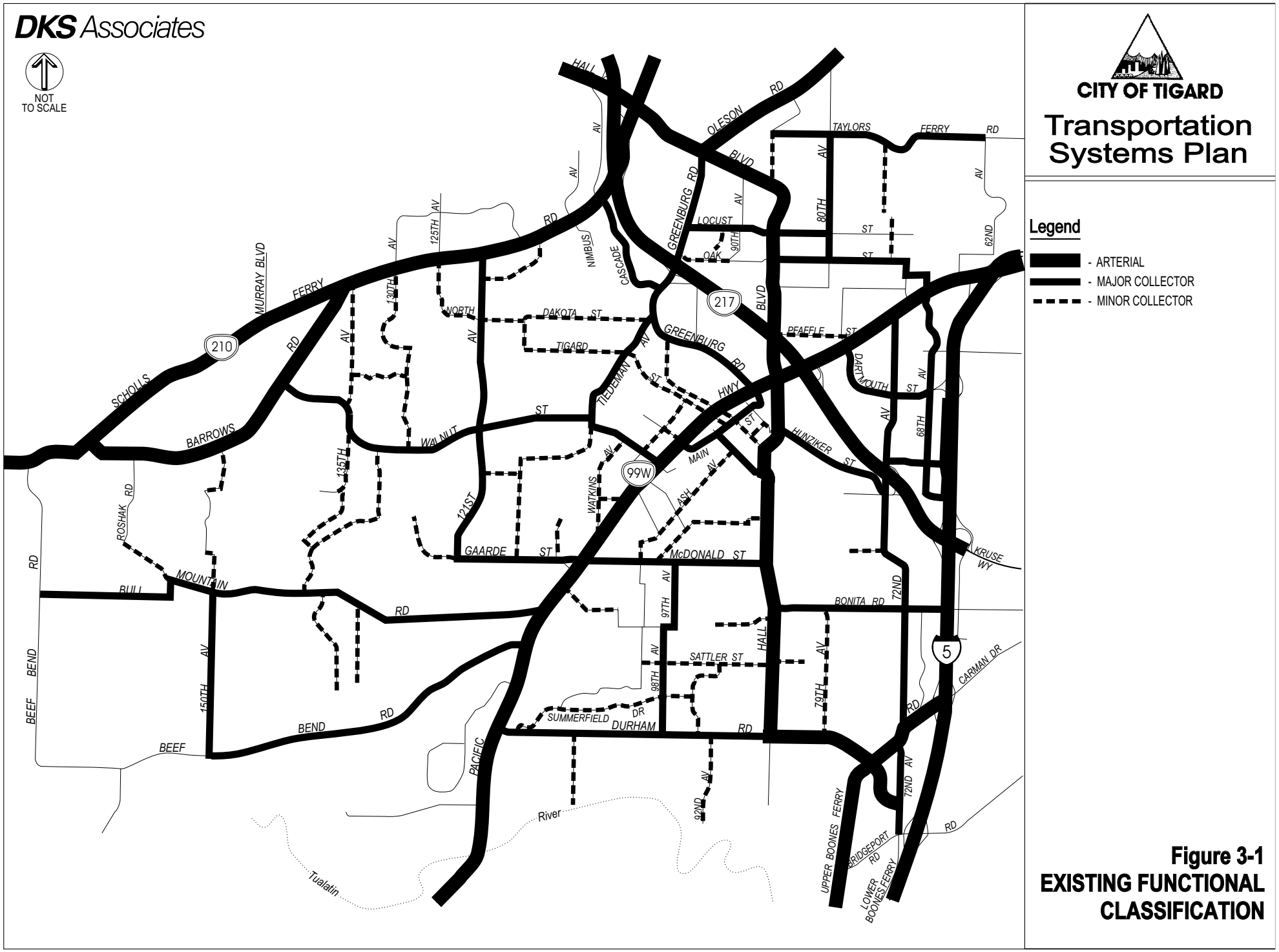


Figure 3-1
EXISTING FUNCTIONAL CLASSIFICATION

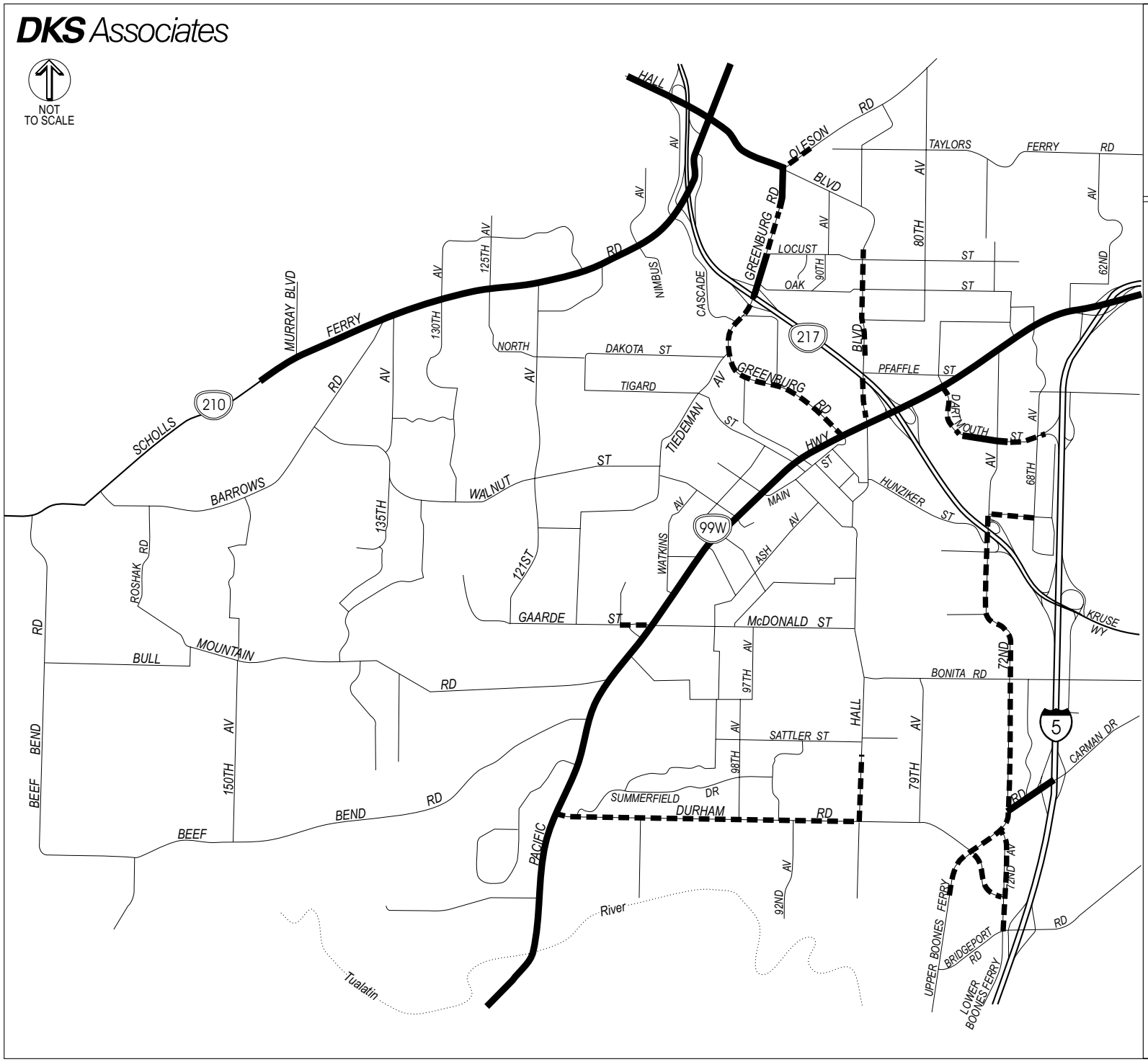
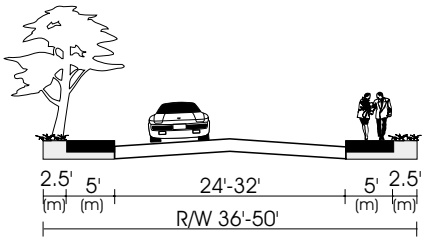
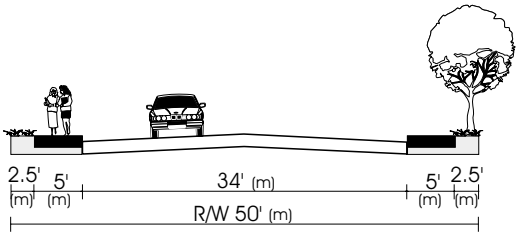


Figure 3-2
ROADWAYS WITH MORE THAN TWO LANES

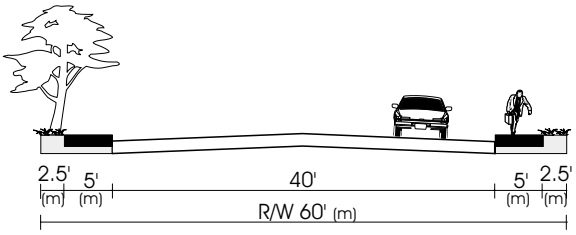
Local Street
Residential



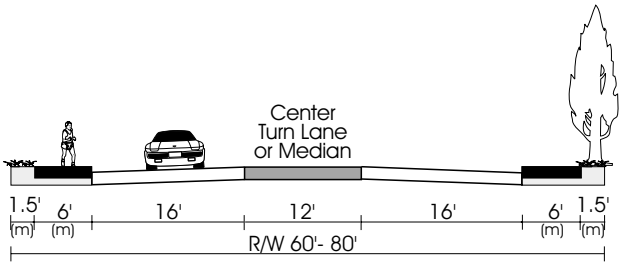
Local Street
Commercial & Industrial



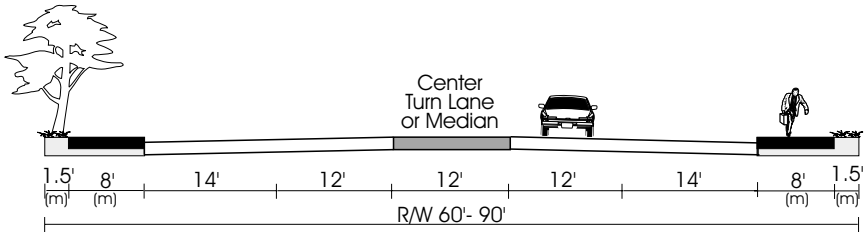
Minor Collector



Major Collector



Arterial



(m) - Minimum Required Width

Figure 3-3
EXISTING
TYPICAL STREET CROSS SECTIONS

Washington County roadway classifications are generally consistent with City of Tigard designations. The following table shows roadway segments where the classification differs between the two jurisdictions. A table summarizing functional classification of Tigard streets by other jurisdictions is shown in the appendix of this report.

Functional Classification Differences

Roadway	**Tigard**	**Washington County**
Greenburg Road	Major Collector	Minor Arterial
Scholls Ferry Road	Arterial	Major Collector

ODOT and **Metro** only classify roads that are of statewide or regional significance, respectively. These classifications are compatible with Tigard classifications, although the specific titles differ to some degree. ODOT and Metro classifications can be found in the Roadway Functional Classification According to Jurisdiction table in the appendix of this report.

TRAFFIC SPEED AND VOLUME

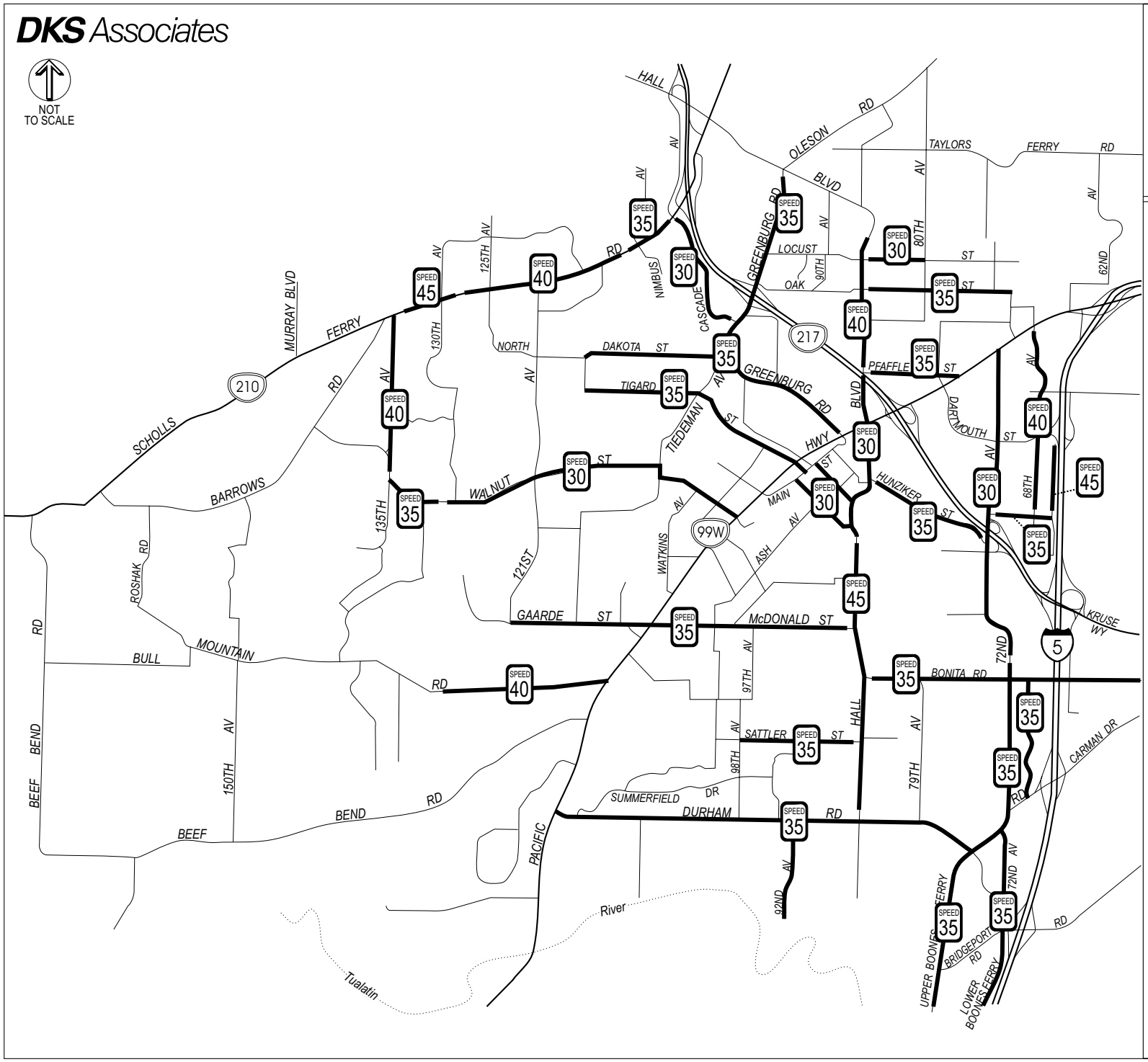
Speed zones on arterials and collectors within the City of Tigard are summarized in Figure 3-4. Speed zones are set by the Oregon's State Speed Control Board (SSCB). The SSCB is an independent board who sets speed zones for city streets, county roads and state highways passing through cities. The SSCB considers any factors such as roadway width, surface, lanes, shoulders, signals, intersections, roadside development, parking, accidents and 85th percentile speed. A decision made by the SSCB is not arbitrary or political, and is based on the considerations described above. Speed zones are set by the State of Oregon using an analysis process which considers the measured 85th percentile speed of traffic on a given roadway. Speed zones are not set arbitrarily or as part of a political decision.[3]

Vehicle speeds on several collector and residential streets are a concern for the community. As examples, streets such as Watkins and Bull Mountain Road are locations mentioned in discussions with the community. In most cases, speeding becomes very noticeable when it is above 35 miles per hour. Speeding can usually be expected on local streets which are wide and straight for long stretches or where downhill grades are extended.

A complete inventory of peak traffic conditions was performed in the fall of 1994 as part of the Tigard Transportation System Plan. The traffic counts conducted as part of this inventory provide the basis for analyzing existing problem areas as well as establishing a base condition for future monitoring. The City of Tigard conducted evening (4-6 PM) peak period turning movement counts at 30 locations to determine intersection operating conditions. Updated counts have been conducted in 1997 and in 1999 at many of these locations, plus a few additional locations, for a total of 62 intersections. Figure 3-5 shows the existing average daily and peak hour traffic volumes on several key routes in Tigard.

On a typical day, ORE 99W is the most heavily traveled street in Tigard. The segment near the ORE 217 ramps carries about 46,000 vehicles per day (two-way). Figure 3-6 shows average daily traffic (ADT) on several routes in Tigard and a comparison of traffic volumes on several routes over the period between 1994 and 1999.

[3] *Speed Zoning: Who Decides*, State Speed Control Board, April, 1992.



CITY OF TIGARD

Transportation Systems Plan

Legend

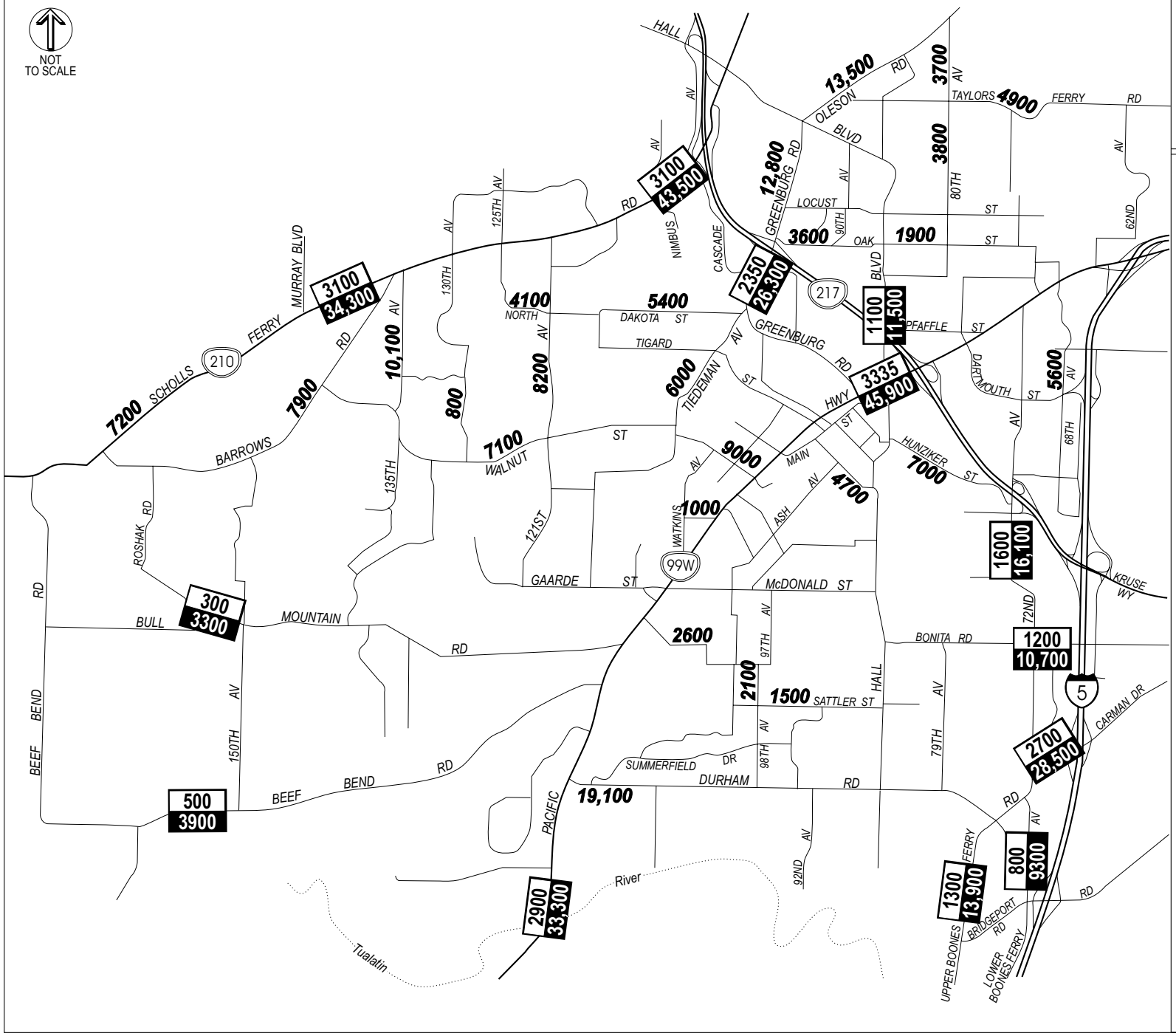
Figure 3-4
EXISTING SPEED ZONES

DKS Associates

NOT TO SCALE

CITY OF TIGARD

Transportation Systems Plan



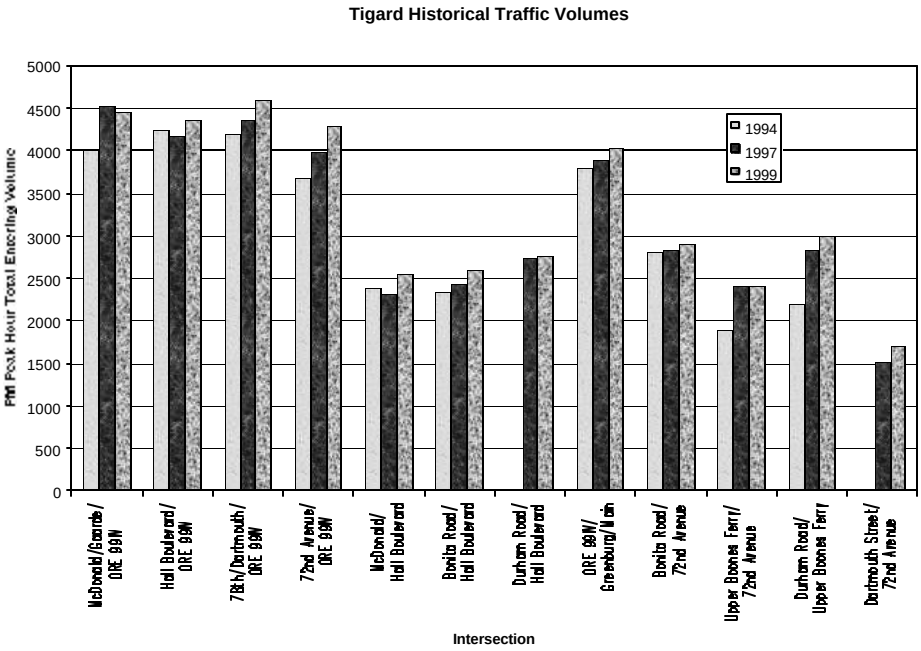
Legend

0000 - Peak Hour Volume
00,000 - ADT Volume

0000 - Daily Volumes from Previous Counts (1993 - 1994)

1999 Traffic Volumes	
Street	**Peak Hour Volume**
Dartmouth Street	1,000
72nd Avenue (south of Dartmouth)	950
Hall Boulevard (north of Durham)	1,375
Durham Road (east of Hall)	2,050
Bonita Road	1,500
McDonald Street	975

Figure 3-5
EXISTING TRAFFIC VOLUMES



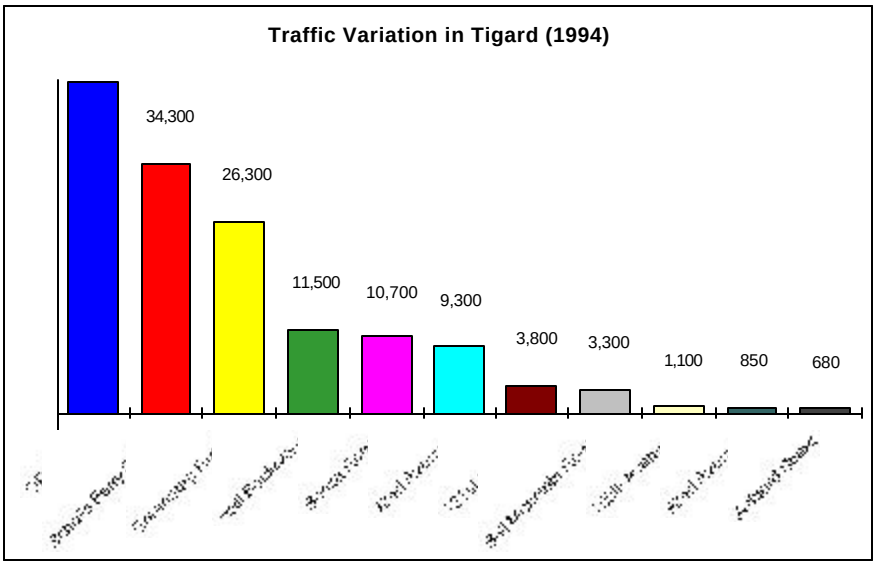


Figure 3-6
Traffic Volume Summaries

Traffic data collected over the course of this study illustrate the typical fluctuations of traffic over the course of a day (Figure 3-7). In particular, Figure 3-7a shows traffic volumes on ORE 99W, both at the south City Limits and near downtown Tigard. This figure demonstrates that morning and evening peak periods have similar characteristics in both locations, but that there is much more midday traffic in downtown than at the south City Limits. In Figure 3-7b, traffic volumes are shown for streets near retail areas of Tigard. These graphs show that traffic volumes generally tend to increase over the course of the day (through the evening peak period). In Figure 3-7c, streets showing typical residential and employment areas are shown. These streets generally tend to peak in the morning and evening peak (commute) hours.

COLLISIONS

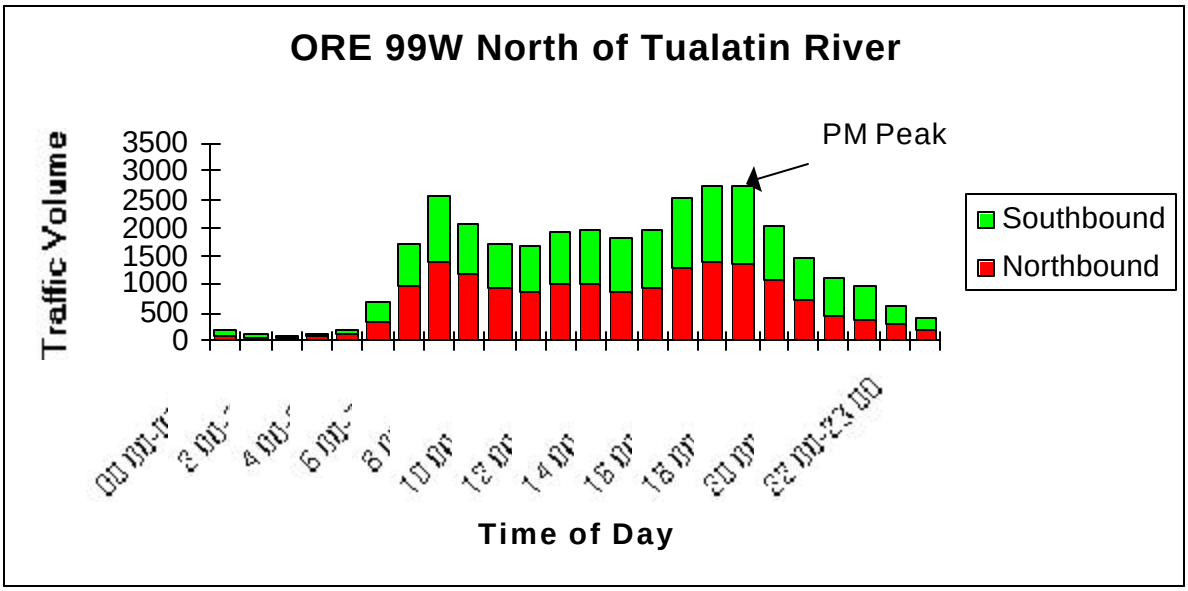
Both the regional highway and regional retail facilities in Tigard tend to generate significant traffic incidents to which the police department routinely responds. The following four areas are all regional in nature and have the highest accident rates in the City:

- ORE 99W - In particular, the segment between Hall Boulevard and ORE 217. Many of the accidents are due to access issues or turning traffic (many driveways).
- ORE 217 - In particular, the segment between ORE 99W and I-5. Many of the problems here are related to merging traffic and rear-end accidents the end of the traffic queue.
- Washington Square - In particular, on Greenburg Road between Locust Street and the ORE 217 ramps due to the large volume of vehicles, weaving and turning vehicles. The large number of people from outside the area traveling to shopping areas increases the number of system users who are not familiar with the circulation.
- Tigard Triangle (bounded by ORE 99W, I-5, ORE 217) - This is developing as a regional retail center, thereby increasing vehicle trips in the area. It is now experiencing similar "out of area" drivers to the Washington Square area. The accident rate has increased by 50 percent in the last two years.[4]

Recent accident data on state highways in Tigard was obtained from ODOT. This data indicates the following:

Route	*1996*	*1997*	*1998*	*Total (1996-1998)*
ORE 99W	323	276	284	883
I-5	47	57	71	175
Hall Boulevard	87	93	115	295
Scholls Ferry Road	9	32	22	63
ORE 217	165	141	132	438

[4] Per meeting with Tigard Police Chief Ron Goodpaster, February 14, 1995.



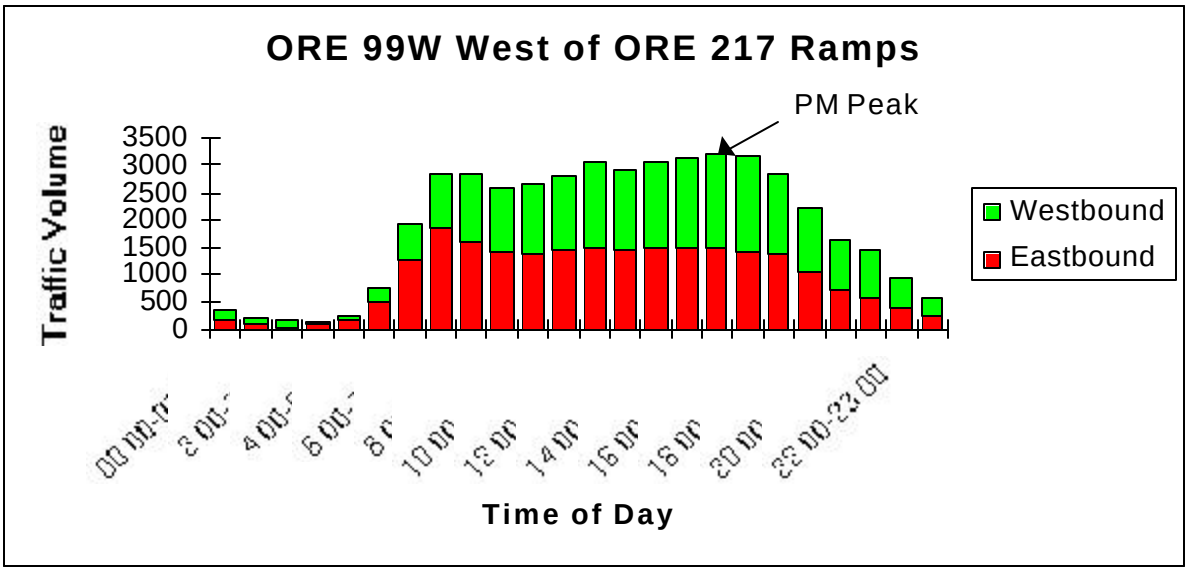
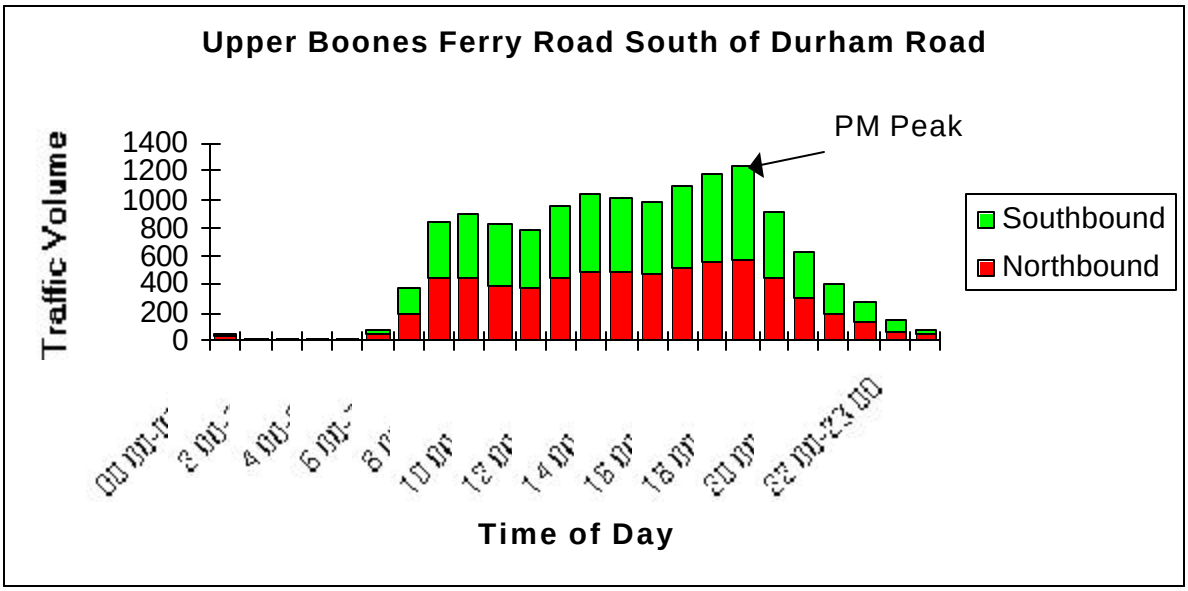


Figure 3-7a
ORE 99W (Hourly Traffic Variation in Tigard)



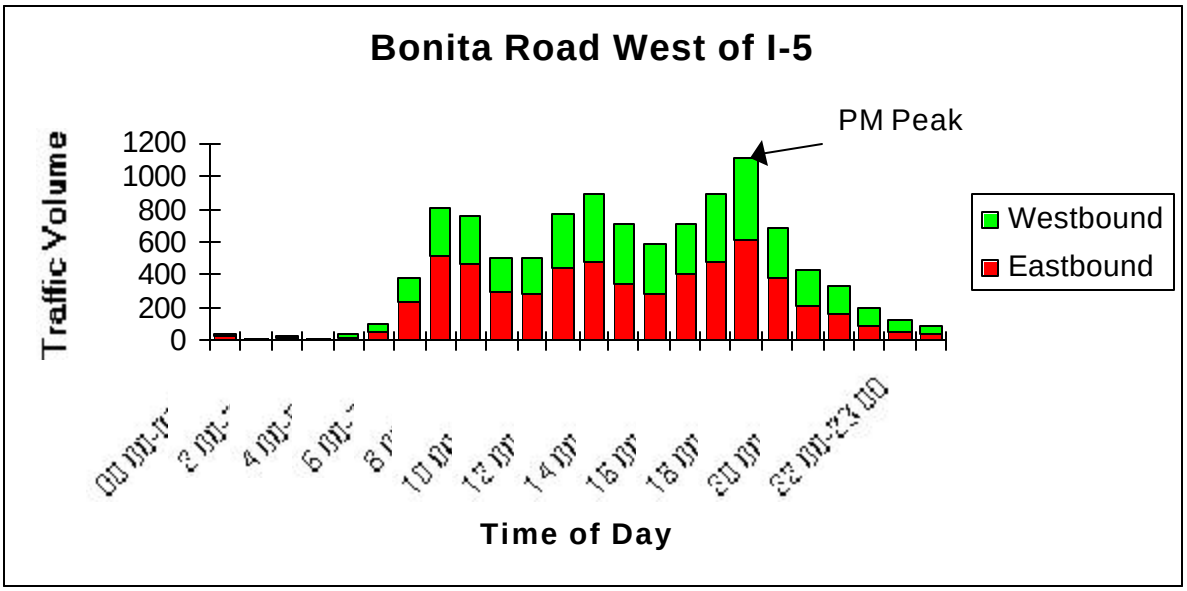
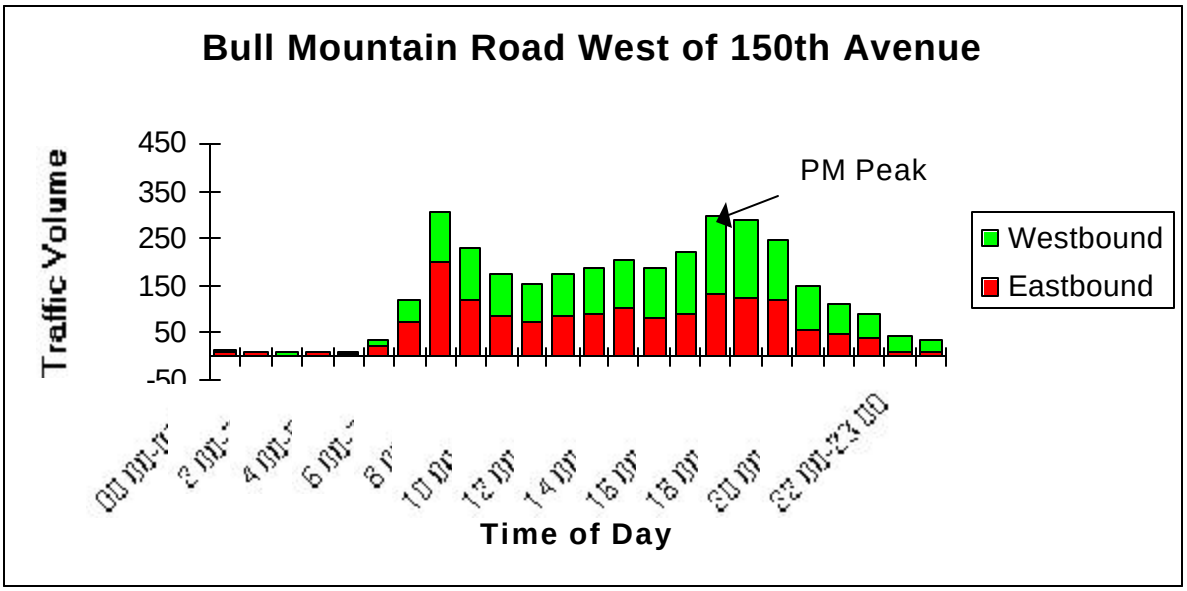


Figure 3-7b
Retail Areas (Hourly Traffic Variation in Tigard)



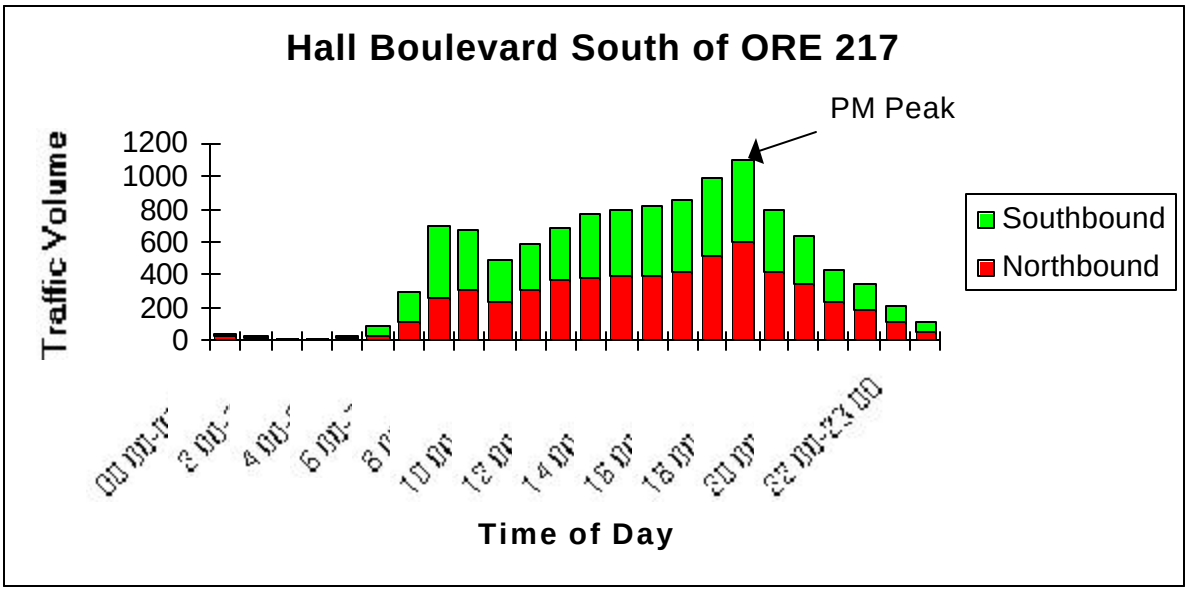


Figure 3-7c
Residential and Employment Areas (Hourly Traffic Variation in Tigard)

Washington County maintains a safety priority index system (SPIS) listing that ranks the high accident locations county-wide. SPIS number and rank are based upon the number, rate and severity of accidents at a particular location. The 1997-1999 is the most current listing. Table 3-1 lists the existing hazard locations as defined by the SPIS value for locations in Tigard for the last three SPIS periods (1994-1996, 1996-1998 and 1997-1999). Fourteen intersections have SPIS values above the threshold identifying existing hazard locations for the 1997-1999 listing produced by Washington County.

Table 3-1
Washington County SPIS Listing
1997-1999

RANK	type	LOCATION	INTERSECTING ROAD	ADT	**SPIS**	**#ACC**
9	co/city	Nimbus Ave/Dr	Scholls Ferry Rd	57877	**99.42**	50
33	co/state	Bull Mountain Rd	Highway 99w	45568	**71.15**	51
36	co/state	Beef Bend Rd	Highway 99w	45460	**69.06**	20
52	co/city	Boones Bend Dr/121st Ave	Scholls Ferry Rd	36158	**60.39**	30
74	co/city	Barrows Road (E)	Scholls Ferry Rd	31305	**50.40**	19
77	co/city	135th Avenue	Scholls Ferry Rd	30654	**49.74**	28
92	co/city	Greenburg Rd	Locust Street	15358	**46.48**	15
94	co/state	Greenberg/Oleson	Hall Blvd	34761	**45.03**	35
139	co/city	North Dakota St/125th Ave	Scholls Ferry Rd	34907	**37.08**	31
143	co/city	Conestoga Drive	Scholls Ferry Rd	38496	**36.31**	17
185	co/city	Taylors Ferry Rd	70th Ave	5957	**29.96**	3
191	co/state	Oak Street	Hall Blvd	16338	**29.45**	10
208	co/state	Locust Street	Hall Blvd	15195	**27.82**	11
218	co/city	130th Avenue	Scholls Ferry Rd	34773	**26.92**	10

SPIS Listing 1996-1998

RANK	type	LOCATION	INTERSECTING ROAD	ADT	**SPIS**	**#ACC**
3	co/state	Hall Blvd	Scholls Ferry Rd	45790	**141.95**	92
10	co/city	Nimbus Ave/Dr	Scholls Ferry Rd	52239	**105.59**	53
31	co/state	Beef Bend Rd	Highway 099w	45460	**74.69**	22
34	co/state	Bull Mountain Rd	Highway 099w	45840	**73.00**	52
38	co/city	Boones Bend Dr/121st Ave	Scholls Ferry Rd	36158	**68.80**	35
48	co/city	Scholls Ferry Rd	135th Ave	30654	**65.79**	30
84	co/state	Greenburg Rd/Oleson Rd	Hall Blvd	34761	**51.36**	39
124	co/state	Garland Rd	Highway 099W	34200	**41.33**	3
142	co/state	Fischer Rd	Highway 099w	38825	**37.42**	24
155	co/city	North Dakota St/125th Ave	Scholls Ferry Rd	34907	**35.55**	28
159	co/co	Old Scholls Ferry Rd (092 Ave)	Scholls Ferry Rd	16462	**35.00**	18
171	co/co	Beef Bend Rd	Bull Mountain Rd	12128	**33.47**	11
173	co/co	Old Scholls Ferry Rd	092nd Ave	620	**33.39**	4
184	co/city	Walnut St	124th Ave	9618	**32.06**	4
192	co/state	Boones Ferry Rd	Bridgeport Rd	23155	**31.25**	6
203	co/co	Scholls Ferry Rd	Scholls Sherwood Rd	8780	**30.17**	3
206	co/state	Hall Blvd	Locust St	15195	**29.32**	11
221	co/city	Scholls Ferry Rd	Springwood Dr	46757	**27.76**	10
249	co/city	Scholls Ferry Rd	130th Ave	34773	**24.52**	9

252	co/state	Hall Blvd	Oak St	16338	**24.23**	8
261	co/co	Walnut St	121st Ave	17165	**23.24**	10
262	co/co	Cedarcrest St	080th Ave	5295	**23.24**	5
264	co/city	Bridgeport Rd/Lwr Boones	072nd Ave	37023	**23.10**	11
267	co/city	Greenburg Rd	Mapleleaf St/WashSq Dr	24645	**22.83**	11
271	co/co	Beef Bend Rd	Elsner Rd	6710	**22.37**	6
288	co/city	Greenburg Rd	Locust St	14035	**20.71**	11
291	co/co	Barrows Rd	Roshak Rd	7108	**20.57**	6
339	co/co	Elsner Rd	Scholls Sherwood Rd	9315	**17.56**	5
342	co/co	Taylors Ferry Rd	080th Ave	10665	**17.17**	7
388	co/co	Scholls Ferry Rd	175th Ave	13375	**14.79**	5
400	co/co	Locust St	080th Ave	7445	**14.17**	3
427	co/co	Old Scholls Ferry Rd (GC)	Scholls Ferry Rd	16144	**12.64**	4
481	co/city	Walnut St	132nd Ave	11484	**9.98**	3
483	co/state	Highway 099w	Pacific Dr (s)	35782	**9.79**	3

Washington County SPIS Listing
1994-1996

						3 YEAR TOTALS					
TYPE	LOCATION	INTERSECTING ROAD	ADT	**SPIS**	RANK	#ACC	#VEH	F	A	B	C
co/state	Hall Blvd	Scholls Ferry Rd	44690	**56.48**	12	61	130	0	0	7	37
co/city	Nimbus Dr	Scholls Ferry Rd	41990	**47.57**	35	40	84	0	1	1	28
co/co	Beef Bend Rd	Scholls Ferry Rd	14495	**46.73**	42	21	39	0	3	5	4
co/city	Boones Bend Dr/121st Ave	Scholls Ferry Rd	36158	**45.81**	45	27	51	1	2	4	13
co/city	135th Ave	Scholls Ferry Rd	30654	**44.66**	54	25	53	0	3	2	9
co/city	Barrows Rd	Scholls Ferry Rd	15600	**43.53**	65	18	39	0	0	0	11
co/state	Bull Mountain Rd	Hwy 99W	41790	**42.93**	73	32	72	0	0	4	19
co/city	North Dakota St/125th Ave	Scholls Ferry Rd	34907	**42.55**	79	22	48	1	2	1	10
co/city	Greenburg Rd	Locust St	10690	**42.27**	83	11	23	0	1	2	1
co/co	Walnut St	121st Ave	14950	**41.48**	89	15	31	0	0	2	10
co/city	Greenburg Rd	Mapleleaf St/WashSq Dr	24645	**39.85**	104	21	43	0	0	1	10
co/co	Beef Bend Rd	Bull Mtn Rd	7320	**38.15**	122	9	19	0	0	3	11
co/state	Greenburg Rd/Oleson Rd	Hall Blvd	25650	**35.39**	155	16	35	0	0	2	10
co/co	Locust St	72nd Ave	2506	**34.83**	163	3	6	0	0	0	2
co/co	Locust St	80th Ave	7445	**32.75**	189	4	8	0	0	4	0
co/state	Beef Bend Rd	Hwy 99W	40260	**32.54**	193	16	33	0	0	5	9

Source: Washington County. R&O 86-95 defines determines existing hazard locations to be SPIS greater than 32.24.

Key: SPIS = Safety Priority Index System, ADT = Average Daily Traffic, Rank = ranking of Countywide SPIS, #Acc = total collisions, #veh = total vehicles, F = fatalities, A = severe injuries, B = moderate injuries, C = minor injuries

SCHOOLS

There are a number of schools in Tigard where the surrounding roadways create barriers for access due to limited width and pedestrian facilities. In conversations with the Tigard-Tualatin School District, the following issues were noted by school site:[5]

- Metzger Elementary: Adequacy of walking paths and adjacent street width
- Mary Woodword School: Difficult for traffic circulation due to congestion
- Fowler Intermediate School: Access from both Walnut Street and Tiedeman Avenue
- Durham Elementary School: Adequacy of Durham Road width, walking paths, turn lanes
- Tigard High School: Driveway spacing conflicts
- Templeton Elementary School: Adequacy of sidewalks

TRAFFIC CONTROL

Tigard has 66 signalized intersections, with the majority on arterial streets. A summary of the ownership of these signals as well as who operates and maintains them is shown in Table 3-2. There are five key coordinated systems within the City. These include:

- ORE 99W
- 72nd Avenue between ORE 217 southbound ramps and Hampton Street
- Scholls Ferry Road
- Greenburg Road between ORE 217 southbound ramps and Locust Street
- 72nd Avenue between ORE 217 southbound ramps and Hampton Street

Of the 66 signals in the City of Tigard, 11 are owned by the City of Tigard, 11 are owned by Washington County and 44 are owned by ODOT. Most signals do not need upgrade or modernization. The signal at Main Street/Scoffins Street is the oldest in the City and would be the most likely candidate for upgrade. The signal at 72nd Avenue/Bonita Road has recently been upgraded to include protective/permissive left turn phasing on all approaches. The signals at Durham/Upper Boones Ferry Road, 72nd Avenue/Boones Ferry Road and 72nd Avenue/Carman Drive should eventually be intertied.

Figure 3-8 shows the signalized locations. Traffic signals are valuable devices for the control of vehicle and pedestrian traffic. Traffic control signals, properly located and operated, can have one or more of the following advantages:

- They provide for the orderly movement of traffic
- Where proper physical layouts and control measures are used, they can increase the traffic handling capacity of the intersection

[5] Per conversation with Dr. Joki, Superintendent, Tigard-Tualatin School District, February 22, 1995.

- They reduce the frequency of certain types of accidents, especially right angle type
- Under favorable conditions, they can be coordinated to provide continuous or nearly continuous movement of traffic at a definite speed along a given route
- They permit minor street traffic, vehicular or pedestrian, to enter or cross continuous traffic on the major street
- Improper or unwarranted signal installations may cause:
    - Excessive delay
    - Disobedience of signal indications
    - Circuitous travel of alternative routes
    - Increased accident frequency, particularly rear-end type

Consequently, it is important that the consideration of a signal installation and the selection of equipment be preceded by a thorough study and be based on consistent criteria. The study must identify the need for left turn phasing, lanes and phase type. The justification for the installation of a traffic signal at an intersection should be based upon the warrants stated in *the Manual on Uniform Traffic Control Devices*[6] (MUTCD). The MUTCD has been adopted by the state of Oregon and is used throughout the nation.

The same conditions hold true for installation of stop sign traffic controls. Specific warrants identify conditions which may warrant two-way or multi-way stop sign installations. A stop sign is not a cure-all and is not a substitute for other traffic control devices. Guidelines and warrants for stop sign installations are outlined in the MUTCD.

[6] *Manual on Uniform Traffic Control Devices for Streets and Highways*, US Department of Transportation, Federal Highway Administration, 1988, pages 4C1-4C12.

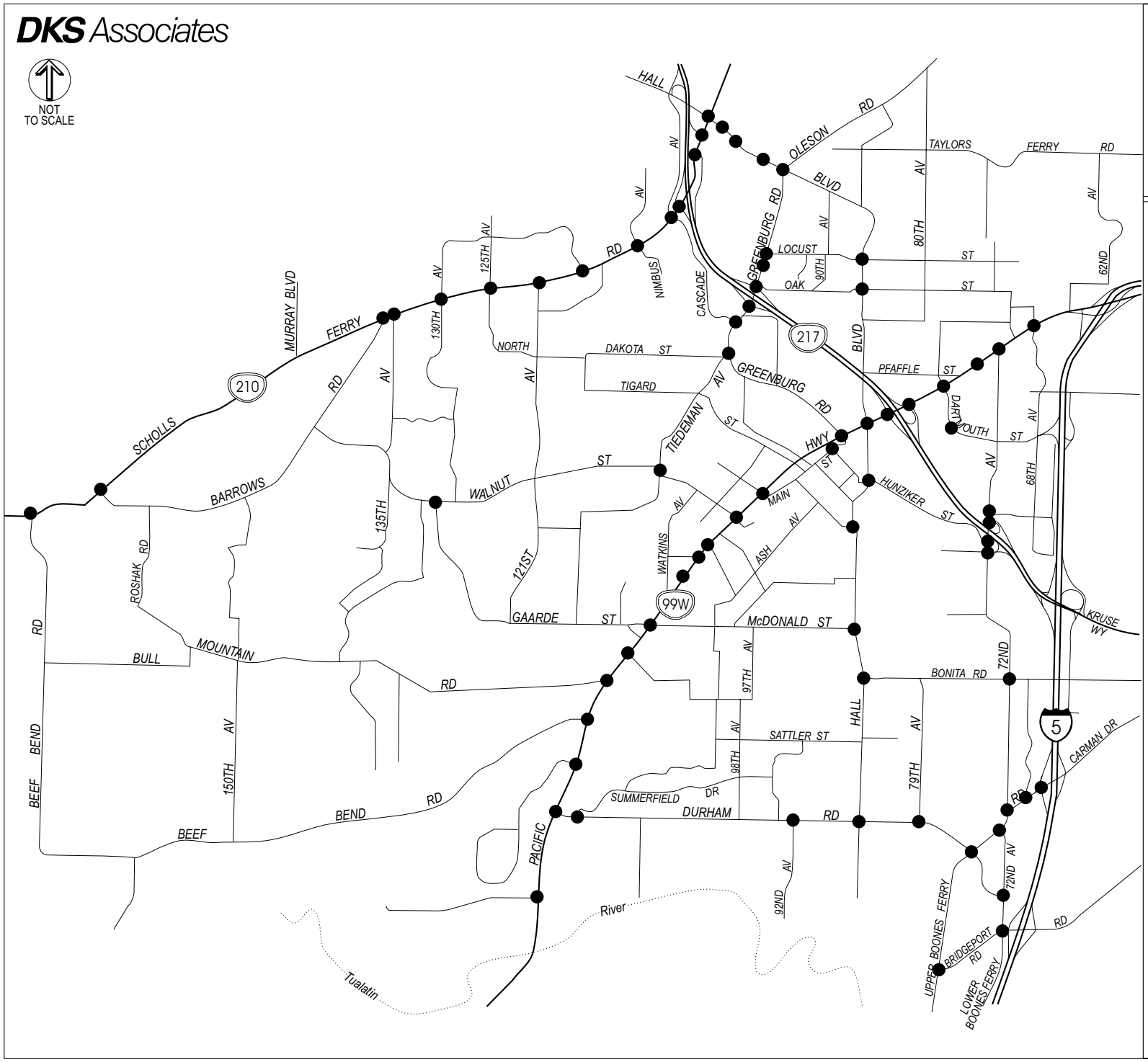


Figure 3-8
SIGNALIZED INTERSECTIONS

Table 3-2
Tigard Signal System

Intersection	Ownership	Agency Operating	Agency Mainaining
Scholls Ferry Road			
Barrows Road (West)	WA County	WA County	WA County
Barrows Road (East)	WA County	WA County	Beaverton
Murray Boulevard	WA County	WA County	Beaverton
130th Avenue	WA County	WA County	Beaverton
125th Avenue	WA County	WA County	Beaverton
121st Avenue	WA County	WA County	Beaverton
Conestoga Drive	WA County	WA County	Beaverton
Nimbus Avenue	WA County	WA County	Beaverton
Cascade Avenue	ODOT	Beaverton	Beaverton
ORE 217 SB Ramps	ODOT	Beaverton	Beaverton
ORE 217 NB On/WA Square	ODOT	Beaverton	Beaverton
Hall Boulevard	ODOT	Beaverton	Beaverton
Hall Boulevard			
Scholls Ferry Road	ODOT	Beaverton	Beaverton
Embassy Suites Driveway	ODOT	ODOT	ODOT
Target Driveway	ODOT	ODOT	ODOT
Circuit City/US Bank Dwys	ODOT	ODOT	ODOT
Greenburg Road/Oleson Road	ODOT	ODOT	ODOT
Locust Street	ODOT	ODOT	ODOT
Oak Street	ODOT	ODOT	ODOT
ORE 99W	ODOT	ODOT	ODOT
Hunziker Street	ODOT	ODOT	ODOT
Burnham Street	ODOT	ODOT	ODOT
McDonald Street	ODOT	ODOT	ODOT
Bonita Road	ODOT	ODOT	ODOT
Durham Road	ODOT	ODOT	ODOT
Durham Road			
ORE 99W	ODOT	ODOT	ODOT
Summerfield Drive	Tigard	Tigard	WA County
92nd Avenue	Tigard	Tigard	WA County
Hall Boulevard	ODOT	ODOT	ODOT
Upper Boones Ferry Road	ODOT	ODOT	ODOT
72nd Avenue	Tigard	Tigard	WA County
72nd Avenue			
Durham Road	Tigard	Tigard	WA County
Upper Boones Ferry Road	Tigard	Tigard	WA County
Carman Drive	Tigard	Tigard	WA County
Bonita Road	Tigard	Tigard	WA County
Varns /ORE 217 SB Ramps	ODOT	ODOT	ODOT
Hunziker Street	ODOT	ODOT	ODOT
ORE 217 NB Ramps	ODOT	ODOT	ODOT

Intersection	Ownership	Agency Operating	Agency Mainaining
Hampton Street	Tigard	Tigard	WA County
ORE 99W	ODOT	ODOT	ODOT
ORE 99W			
68th Avenue/69th Avenue	ODOT	ODOT	ODOT
72nd Avenue	ODOT	ODOT	ODOT
Tigard Cinemas	ODOT	ODOT	ODOT
Dartmouth Street	ODOT	ODOT	ODOT
ORE 217 NB Ramps	ODOT	ODOT	ODOT
ORE 217 SB Ramps	ODOT	ODOT	ODOT
Hall Boulevard	ODOT	ODOT	ODOT
Greenburg Road	ODOT	ODOT	ODOT
Johnson Street/Main Street	ODOT	ODOT	ODOT
Walnut Place	ODOT	ODOT	ODOT
Garrett Street	ODOT	ODOT	ODOT
Park Street	ODOT	ODOT	ODOT
Tigard Marketplace	ODOT	ODOT	ODOT
Gaarde/McDonald Street	ODOT	ODOT	ODOT
Canterbury Lane	ODOT	ODOT	ODOT
Bull Mountain Road	ODOT	ODOT	ODOT
Beef Bend Road	ODOT	ODOT	ODOT
Royalty Parkway	ODOT	ODOT	ODOT
Durham Road	ODOT	ODOT	ODOT
Fischer Road	ODOT	ODOT	ODOT
Greenburg Road			
ORE 99W	ODOT	ODOT	ODOT
Tiedeman Avenue	Tigard	Tigard	WA County
Cascade Boulevard	Tigard	Tigard	WA County
ORE 217 SB Ramps	ODOT	ODOT	ODOT
ORE 217 NB Ramps	ODOT	ODOT	ODOT
Washington Square Road	WA County	WA County	WA County
Locust Street	WA County	WA County	WA County
Hall Boulevard/Oleson Road	ODOT	ODOT	ODOT
Carman Drive			
I-5 SB Ramps	ODOT	ODOT	ODOT
I-5 NB Ramps	ODOT	ODOT	ODOT
Sequoia Parkway	Tigard	Tigard	WA County
Upper Boones Ferry Road			
Bridgeport Road	ODOT	ODOT	ODOT
Durham Road	ODOT	ODOT	ODOT
Main Street			
Scoffins Street	Tigard	Tigard	WA County

TRAVEL TIME INFORMATION

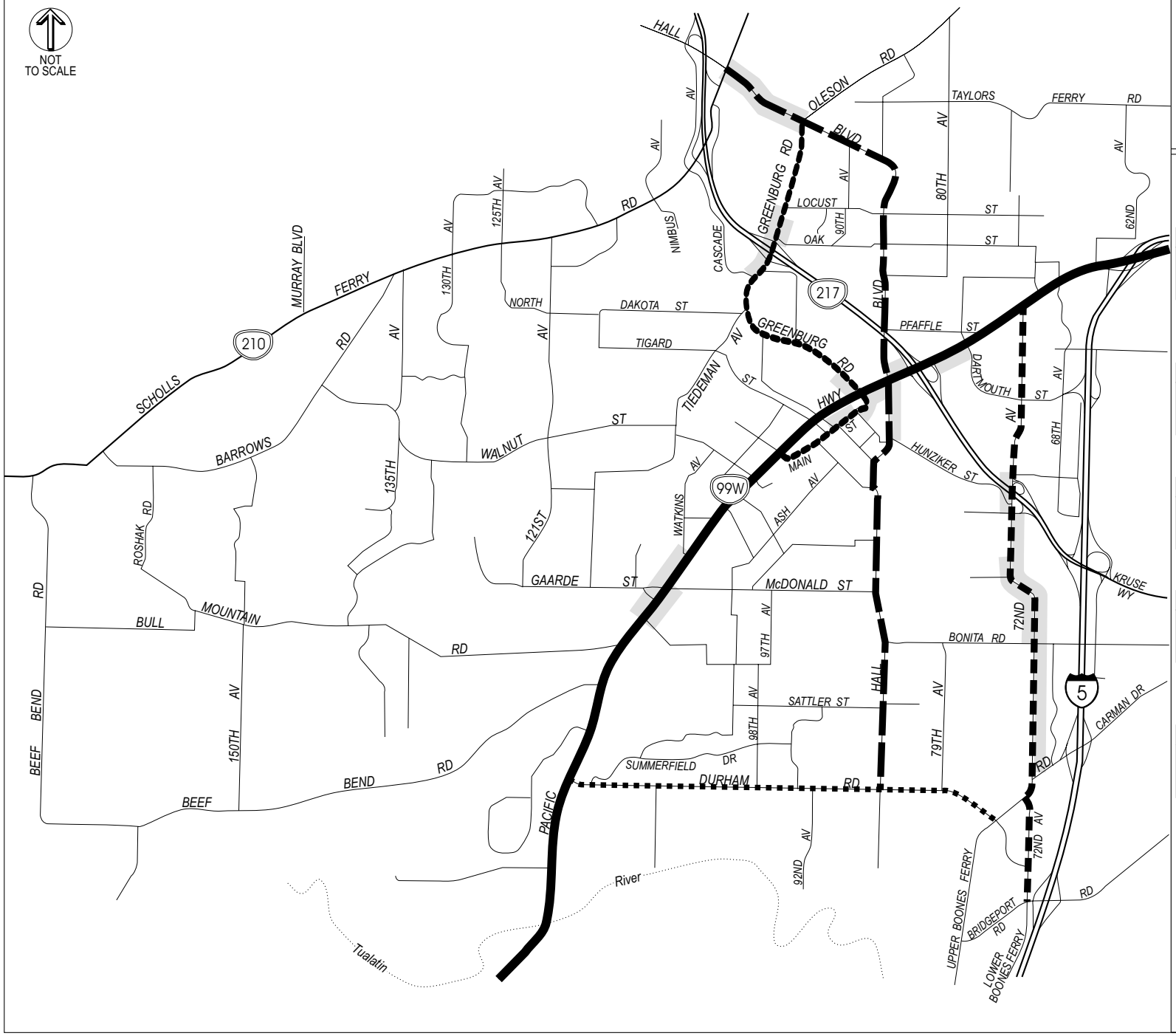
Travel time information was collected to provide a gauge of roadway system performance. Travel time runs were conducted on several key routes in Tigard. These travel time runs measured the length of time it took to travel from a starting point to and end point of each key route (typically, a mile or more in length) during various time periods during the week. The key routes surveyed were ORE 99W, Hall Boulevard, 72nd Avenue, Main Street/Greenburg Road and Durham Road. The time periods observed were weekday morning peak, weekday midday, weekday evening peak and Saturday midday. The most significant delays were generally observed in the PM peak hour. However, on two routes which are heavily influenced by retail activity, delays were significant at other times (ORE 99W Saturday and Greenburg midday). The results of these travel time runs are shown in Figure 3-9. Travel times from various time periods are shown for comparison.

72nd Avenue shows significant delay both northbound and southbound in the PM peak hour. Since 1994, new signal timings were installed at four intersections near ORE 217 and the four intersections linked via interconnect. Delays through these four intersections were initially reduced by more than 40% in both the northbound and southbound directions as a result of this improvement. Since the initial delay reduction a few years ago, the route has attracted additional demand and at least 70-100 additional northbound and about 200-300 additional southbound vehicles now use this route in the evening peak hour, which has increased delays on the route.

Travel time data on ORE 217 indicates that some of the slowest travel speed on the facility occurs in Tigard. Floating car surveys were conducted on ORE 217 during the morning and evening peak periods (see appendix for data summaries). Travel time data were collected along the entire length of ORE 217 at various times through the peak period. The average travel speed for the entire corridor drops to between 30 and 40 miles per hour (mph) during periods of time in both the morning and evening peak representing level of service F conditions for those time segments. Figure 3-10 summarizes the peak travel speeds over the length of ORE 217.

DKS Associates

NOT TO SCALE



CITY OF TIGARD

Transportation Systems Plan

Legend

Hall Boulevard

DIRECTION	MID	PM
N/B	10:26	11:48
S/B	9:04	12:58

72nd Avenue *

		PM	
DIRECTION	MID	Before	After
N/B	7:41	15:37	13:25
S/B	6:42	9:10	8:49

Main St./Greenburg Rd.

DIRECTION	MID	PM
E/B - N/B	10:22	9:22
S/B - W/B	9:35	9:26

Durham Road

DIRECTION	MID	PM	SAT
E/B	4:15	4:21	4:24
W/B	4:25	6:57	4:56

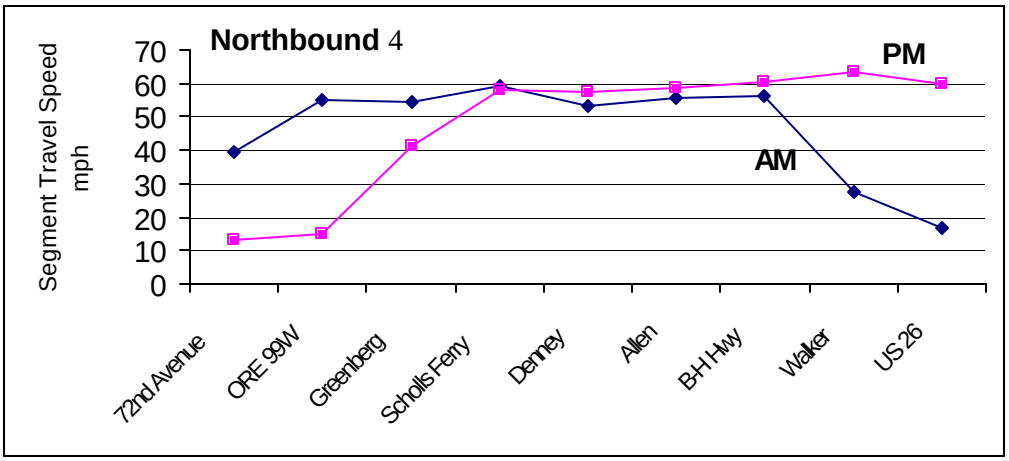
ORE 99W

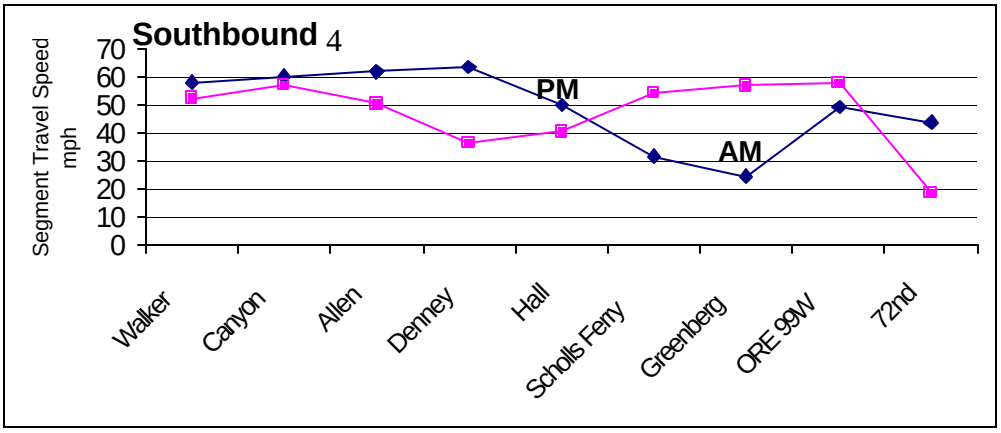
DIRECTION	MID	PM 1994	PM 1997	SAT
E/B	10:27	13:32	13:47	19:22
W/B	11:12	12:39	15:59	11:25

MID - MIDDAY, 1:00pm - 3:00pm
PM - PM PEAK, 4:00pm - 6:00pm
* - Signal Timing Change 12/94
- Sections with D, E or F - LOS

Figure 3-9
1994
TRAVEL TIME SURVEYS
(Except where Noted)

Figure 3-10
Travel Speed Profiles for ORE 217
April/May 1999
For Critical (slowest) Time Slice





Source: ORE 217 Corridor Study Initial Improvement Concepts Draft, ODOT, February 2000.

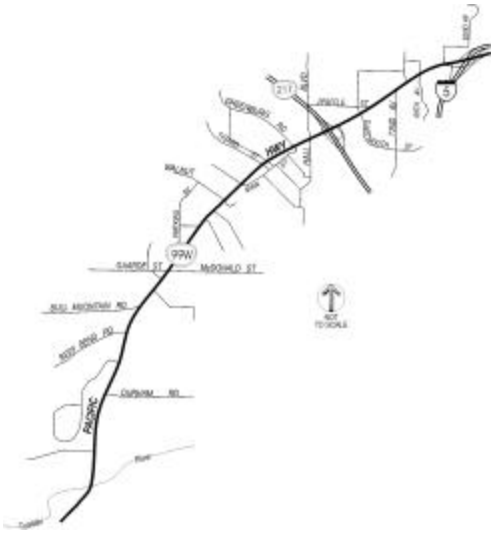
TRAFFIC PERFORMANCE ON KEY STREETS

The following sections review the performance of various key routes in Tigard in terms of volumes, capacity, accidents, adjacent land use (including schools), intersection level of service, arterial level of service and general observations. The key routes include ORE 99W, Scholls Ferry Road, Hall Boulevard, Greenburg Road, 72nd Avenue and Durham Road/Boones Ferry Road/Carman Drive. Each route evaluation is organized to provide a description in terms of functional classification, number of lanes, existing traffic volumes, accident locations and a summary of PM peak hour operating conditions. The 1994 calculations were based on the *1985 Highway Capacity Manual.* Since then, the Highway Capacity Manual has been updated twice and the 1997 calculations are based on *the 1994 Highway Capacity Manual* and the 1999 calculations are based on the *1997 Highway Capacity Manual.* While there are some subtle distinctions in the methodologies used, the results produced are comparable.

In general, intersection level of service in Tigard has either remained the same or degraded slightly over the past three years. As regional growth has occurred, traffic volumes around the City have increased. In 1999, most intersections in Tigard operate at level of service D or better, with some exceptions. The intersections which are operating at conditions below level of service D in 1999 are discussed in the following sections.

Travel time runs (which provided the data for the arterial level of service analysis) are shown graphically in Figure 3-9. Areas where arterial level of service is D or worse are identified on these figures. Arterial level of service was calculated according to the *1994 Highway Capacity Manual*.[7] A majority of these runs were conducted in 1994, with updated runs on ORE 99W conducted in 1997. Overall, average evening peak hour travel time along ORE 99W westbound (between 68th Avenue (near I-5) and Fischer Road, west of the City limits) has increased by about three minutes. Travel time in the opposite direction (eastbound) has remained approximately the same. More information on level of service descriptions and calculations (both arterial and intersection) as well as travel time methodology, can be found in the appendix.

ORE 99W



ORE 99W provides regional access to the City of Tigard, but also serves a large percentage of local traffic. ORE 99W connects Tigard with cities to the south and west and eventually to the Oregon Coast. To the east, ORE 99W becomes Barbur Boulevard, a key route in Portland, providing access to downtown Portland. Tigard classifies ORE 99W as an arterial while Washington County and Metro designate it a Major Arterial. ODOT's designation is a Statewide Highway as part of the National Highway System. Portland designates Barbur Boulevard as a regional trafficway.

ORE 99W carries approximately 33,300 vehicles per day (ADT - Average Daily Traffic) near the south Tigard city limits and approximately 45,900 ADT near downtown. ORE 99W is a five lane roadway throughout Tigard. Figure 3-11 shows the percentage of vehicles which are local for various segments.[8] The percentage of local trips on ORE 99W is much higher near downtown Tigard than at either end.

The table below summarizes level of service for a number of signalized intersections along ORE 99W during the weekday evening peak hour. Of the 16 intersections analyzed, all but one intersection performs at level of service D or above. This is generally considered to be acceptable operating performance for a signalized intersection. There are five intersections which operate at level of service D, ORE 99W/Durham Road, ORE 99W/Walnut Street, ORE 99W/Greenburg Road/Main Street, ORE 99W/Hall Boulevard, and ORE 99W/72nd Avenue. If additional traffic is added to these intersections, it is possible that they may decline to an unacceptable level of service. One intersection, ORE 99W/McDonald Street/Gaarde Street,

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7 *1994 Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington D.C., 1994, Chapter 11.

8 Data provided to the City of Tigard by Metro, December 1992. A plot was generated showing trips on ORE 99W with either an origin or destination in a Tigard traffic analysis zone. This plot was then related to a plot showing all trips on ORE 99W.

currently operates at level of service E. This intersection is already operating at unacceptable levels of service and long queues tend to form on various legs of the intersection. Sometimes these queues extend to other intersections, creating unnecessary operating problems there as well. A long queue (greater than 20 vehicles) forms for about 15-20 minutes in the PM peak hour at the intersection at 68th Parkway/69th Avenue. Over the course of the entire peak hour, this intersection performs acceptably.

It should be noted that the 1997 and 1999 LOS calculations at Hall Boulevard/ORE 99W reflect a lane configuration change in the northbound direction, resulting in a slightly improved level of service over 1994 conditions.

Figure 3-11

PM Peak Hour Intersection Level of Service
Signalized Intersections Along ORE 99W

Signalized Intersections	1994*			1997*			1999*		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Durham Road	D	27.9	0.77				D	48.7	0.88
Beef Bend Road	B	12.1	0.86	B	11.1	0.80			
Bull Mtn Road	B	8.3	0.67						
Canterbury Lane	B	9.8	0.74						
McDonald/Gaarde	D	33.0	0.93	E	50.5	1.0	E	58.9	1.0
Tigard Mktplace	B	12.4	0.60						
Park Street	A	4.8	0.58						
Walnut Street	D	27.2	0.89	D	31.8	0.95			
Main/Johnson	B	12.6	0.62	B	13.2	0.70			
Greenburg/Main	E	43.1	0.97	D	30.3	0.85	D	43.9	0.85
Hall Boulevard	E	46.3	0.99	D	34.5	0.91	D	49.2	0.87
ORE 217 SB Ramps	C	19.2	0.75	C	21.6	0.83			
ORE 217 NB Ramps	B	5.5	0.65	B	6.5	0.75			
78th Ave/Dartmouth[9]	C	19.7	0.81	C	24.3	0.89	D	35.5	0.86
72nd Avenue[10]	B	14.7	0.75	D	25.6	0.93	C	32.9	0.86
68th/69th Avenues	C	16.0	0.87						

* For analysis purposes the capacity calculation methodology has changed twice over the past six years. The level of service analysis was conducted using the following methodology:

1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 Calculations use 1994 HCM Methodology
1999 Calculations use 1997 HCM Methodology

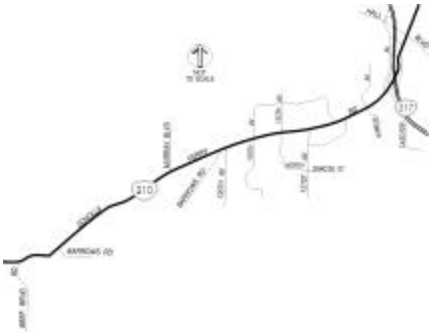
[9] 1994 counts conducted prior to opening of Costco on Dartmouth Street, therefore, counts may be lower than normal.

[10] 1994 counts conducted during Fred Meyer Strike (August, 1994) and may therefore be lower than normal.

The 1994 arterial level of service along ORE 99W tends to mimic that at the signalized intersections. ORE 99W generally flows at a level of service between A and C except in certain areas. These areas generally correspond to areas where intersection level of service is poor. Segments experiencing levels of service D or worse include, ORE 99W northbound between Main Street/Johnson Street and ORE 217 southbound ramps, and southbound from I-5 to 72nd Avenue, from ORE 217 northbound ramps to Hall Boulevard and from Main Street/Johnson Street to Walnut Street. It should be noted that, since ORE 99W is congested between Main Street/Johnson Street and ORE 217, it is unable to deliver as much traffic as is demanded at specific intersections. Because of this, intersection level of service does not appear as poor as arterial level of service, which is more reflective of route (rather than intersection) congestion.

Scholls Ferry Road

Scholls Ferry Road is an east-west roadway that serves as the north city limits for much of Tigard. It is five lanes from Murray Boulevard to Hall Boulevard. It carries approximately 30,000 to 45,000 ADT through Tigard. It has recently been transferred to Washington County, except the portion in the interchange area near ORE 217. It is classified by Metro and Washington an Major Arterial to the west of ORE 217 and as a Minor Arterial to the east of ORE 217. The City of Tigard and Beaverton both classify it as an Arterial for its length within the city limits. Scholls Ferry Road serves local traffic, but also provides regional access to Beaverton, ORE 217 and cities to the west of Tigard.



Arterial level of service was not analyzed for Scholls Ferry Road and intersection level of service was only analyzed for 1999 volumes. Scholls Ferry Road serves as a border between Tigard and Beaverton and is under the jurisdiction of ODOT and Washington County. Although it provides access to Tigard, it is not integral to the internal street network of Tigard.

PM Peak Hour Intersection Level of Service
Signalized Intersections Along Scholls Ferry Road

Signalized Intersections	1999*		
	LOS	Delay	V/C
Beef Bend Road	C	25.5	0.84
Barrows Road (West)	B	8.3	0.54
Murray Boulevard	C	29.8	0.79
Barrows Road (East)	B	15.0	0.57
North Dakota/125th	D	42.9	0.95
Nimbus Avenue	D	47.0	0.98

* 1999 Calculations use 1997 HCM Methodology

Hall Boulevard

Hall Boulevard is a north-south roadway that predominantly serves local Tigard traffic, but also provides access to Beaverton to the north. It is classified by Metro and Washington County as a Minor Arterial and by the City of Tigard and Beaverton as an arterial. ODOT classifies Hall as a District Highway. It carries approximately 12,000 to 23,000 ADT through Tigard. It is generally two lanes, with occasional left turn lanes, from Durham Road to Greenburg Road. It is three lanes between Durham Road and just south of Sattler Street, between ORE 99W and Pfaffle Street and between just north of Spruce Street and just north of Locust Street, and five lanes from Greenburg Road to Scholls Ferry Road. There are 11 traffic signals at intersections on Hall Boulevard. It has many driveways connecting directly to the roadway, serving mostly commercial and residential land uses. A driveway survey was conducted along Hall Boulevard and can be found in the appendix of this report.[11]

The table below summarizes level of service for a number of intersections on Hall Boulevard. Of the seven intersections analyzed, four perform at level of service D. Hall Boulevard/McDonald Street and Hall Boulevard/Durham Road have long queues on some approaches. The queues at Hall Boulevard/McDonald street are on the northbound left and southbound approaches and the queues at the Hall Boulevard/Durham Road intersection are on the southbound and westbound through approaches. These queues generally tend to clear during each signal cycle, but both intersections are virtually at capacity. 1994 arterial level of service along Hall Boulevard shows levels of service C and above are experienced everywhere along Hall Boulevard, except at ORE 99W, where level of service D is experienced both northbound and southbound.

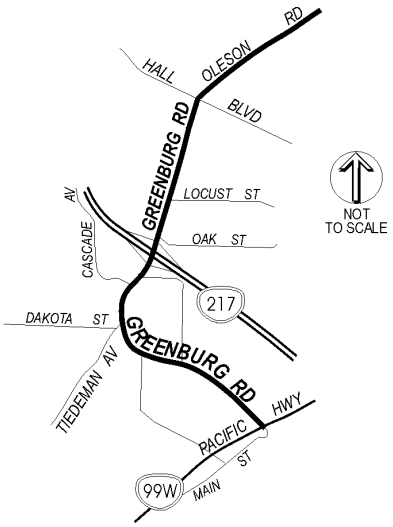
PM Peak Hour Intersection Level of Service
Signalized Intersections Along Hall Boulevard

Signalized Intersections	1994*			1997*			1999*		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Locust Street	B	12.7	0.56	C	19.8	0.86			
ORE 99W	E	46.3	0.99	D	34.5	0.91	D	49.2	0.87
Hunziker Street	B	14.0	0.62						
Burnham Street	B	13.0	0.54						
McDonald Street	C	20.7	0.99	E	52.7	1.0	D	38.0	0.93
Bonita Road	C	16.8	0.68	C	21.0	0.97	D	47.7	0.90
Durham Road	C	24.1	0.83	E	48.1	1.0	D	45.1	0.86

* 1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 Calculations use 1994 HCM Methodology
1999 Calculations use 1997 HCM Methodology

[11] Driveway survey, conducted by DKS Associates, September, 1994.

Greenburg Road



Greenburg Road is a north-south street connecting downtown Tigard to the Washington Square area. It provides direct access to both ORE 99W and ORE 217. At Hall Boulevard, Greenburg Road becomes Oleson Road as it proceeds north into Portland.

Greenburg Road, is classified by Metro as a Major Arterial and by Washington County as a Minor Arterial north of ORE 217 and as a Major Collector south of ORE 217. It is classified, for its length, by Tigard as a Major Collector. The City of Portland designates Oleson as a Neighborhood Collector. It is three lanes between ORE 99W and Hall Boulevard, except between ORE 217 and Locust Street and just south of Hall Boulevard where it is five lanes.

The table below summarizes level of service for four signalized intersections on Greenburg Road. Of these four intersections, two operate acceptably at level of service C and the others, Greenburg Road/Main Sreet/ORE 99W and Greenburg Road/Oleson Road/Hall Boulevard operate at level of service D. Long queues form in the eastbound direction on ORE 99W in the PM peak hour, with vehicles waiting through multiple cycles to clear the intersection. Some of this queuing may be caused by unacceptable operating conditions at Hall Boulevard, where the queue spills back to the Greenburg Road/Main Street/ORE 99W intersection.

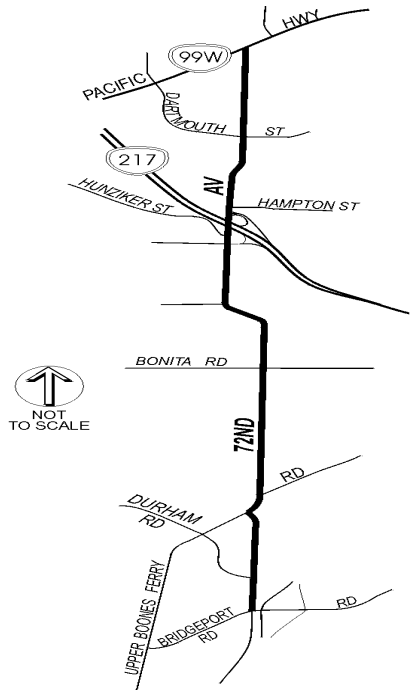
Arterial level of service along Greenburg Road/Main Street is above level of service C for most of the length of the route. Locations experiencing levels of service D and lower include northbound Main Street between Scoffins and ORE 99W, northbound Greenburg Road between ORE 217 northbound ramps and Washington Square Road, southbound Greenburg Road between Locust Street and Cascade Boulevard and between Center Street and ORE 99W. The arterial level of service on this route is comparable to intersection level of service, especially since arterial level of service near ORE 99W is poor, where the intersection operates at level of service E.

PM Peak Hour Intersection Level of Service
Signalized Intersections Along Greenburg Road

Signalized Intersections	1994*	1997*	1999*
	LOS Delay V/C	LOS Delay V/C	LOS Delay V/C
ORE 99W/Main	E 43.1 0.97	D 30.3 0.85	D 43.9 0.85
Tiedeman Ave	C 19.0 0.77		
Wash Square Rd		C 23.3 0.73	
Oleson/Hall Blvd		D 34.3 0.95	

* 1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 Calculations use 1994 HCM Methodology
1999 Calculations use 1997 HCM Methodology

72nd Avenue



72nd Avenue is a north-south roadway serving mostly local traffic in Tigard. It serves industrial traffic from land uses along its frontages, but also provides connections to ORE 99W, ORE 217, I-5 and Tualatin to the south. It is a three lane roadway between Bridgeport Road and the ORE 217 ramps. North of there, it is a two lane roadway with occasional left turn lanes. 72nd Avenue is classified as a Major Collector by the City of Tigard and as a Minor Arterial by Metro. It is not classified by Washington County. 72nd Avenue carries approximately 16,000 ADT.

The table below summarizes level of service for several signalized intersections on 72nd Avenue. Of the 10 signalized intersections, five perform at level of service C or above (generally considered acceptable operating conditions). The five remaining intersections, 72nd Avenue/ORE 99W, 72nd Avenue/ORE 217 Northbound Ramps, 72nd Avenue/ORE 217 Southbound Ramps/Varns Street, 72nd Avenue/Bonita Road and 72nd Avenue/Carman Drive operate at level of service D. Several of these intersections have been improved in the past few years. 72nd Avenue/Bonita Road was changed from protected left turn phasing on all approaches to protected/permissive phasing on all approaches. 72nd Avenue/ORE 217 Northbound Ramps and 72nd Avenue/ORE 217 Southbound Ramps/Varns Street were part of an overall signal timing/coordination project along 72nd Avenue between Varns Street/ORE 217 Southbound Ramps and Hampton Street. While these intersections operate at a better level of service as a result of these improvements, the 72nd Avenue has become a more desirable route, attracting at least 70-100 additional northbound vehicles and approximately 200-300 additional southbound vehicles between Hampton Street and the ORE 217 Southbound Ramps/Varns Street intersections.

Arterial level of service along 72nd Avenue is poor (level of service D or lower) for a significant portion of its length. In particular level of service is poor northbound from Upper Boones Ferry Road to the ORE 217 southbound ramps. In the southbound direction, level of service is poor between Hampton Street and the ORE 217 southbound ramps, between Sandburg Street and Bonita Road and between Carman Drive and Upper Boones Ferry Road. This is fairly consistent with the intersection operating conditions, which are mostly at level of service D in these areas. In this case, arterial level of service is poor, while intersection level of service may not look so bad since a number of closely spaced signals were not interconnected when the travel time runs were made. Since these signals were not interconnected, additional delay was introduced from uncoordinated signal timing. These signals have since been retimed and the arterial level of service is much improved, however increased traffic volumes create increased delay.

PM Peak Hour Intersection Level of Service
Signalized Intersections Along 72nd Avenue

Signalized Intersections	1994*			1997*			1999*		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
ORE 99W	B	14.7	0.75	D	25.6	0.93			
Hampton Street	B	11.5	0.43						
ORE 217 NB Ramps	B	10.9	0.48	D	29.6	0.99			

Signalized Intersections	1994*	1997*	1999*
	LOS Delay V/C	LOS Delay V/C	LOS Delay V/C
Hunziker Street	C 16.3 0.84	C 22.7 0.93	
ORE 217 SB/Varns	E 40.7 1.00	D 36.2 0.99	
Bonita Road	E 48.2 0.95	D 37.9 0.89	D 47.7 0.90
Carman Drive	C 24.8 0.79	D 29.4 0.88	
Upper Boones Ferry		B 12.0 0.67	B 17.6 0.65
Durham Road	B 8.7 0.31		
Bridgeport Road	B 12.5 0.54		

* 1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 Calculations use 1994 HCM Methodology
1999 Calculations use 1997 HCM Methodology

Durham Road/Boones Ferry Road/Carman Drive

Durham Road is an east-west roadway that serves the southern part of Tigard. It is three lanes for its length. Durham Road is classified by Metro as a Minor Arterial, by Washington County as a study area west of Hall and as a Minor Arterial east of Hall, and as an Arterial by the City of Tigard east of Hall Boulevard. West of Hall Boulevard, it is classified by the City of Tigard as a Major Collector. Lake Oswego designates Carman Drive as a Major Collector. The route provides predominantly local access, but also serves vehicles traveling to ORE 99W or I-5 via Boones Ferry Road and Carman Drive and through traffic between King City and I-5.

The table below summarizes level of service conditions along Durham Road/Boones Ferry Road/Carman Drive. Five of the six intersections perform at level of service D or above. ORE 99W/Durham Road, Hall Boulevard/Durham Road, Upper Boones Ferry Road/Durham Road and I-5 northbound ramps/Carman Drive all operate at level of service D. I-5 southbound ramps/Carman Drive operates at level of service E and is just about at capacity. Queues tend to form westbound and southbound at ORE 99W/Durham Road, with some vehicles waiting through more than one signal cycle. The same is true at Hall Boulevard/Durham Road.

PM Peak Hour Intersection Level of Service
Signalized Intersections on Durham Road

Signalized Intersections	1994*	1997*	1999*
	LOS Delay V/C	LOS Delay V/C	LOS Delay V/C
ORE 99W	D 27.9 0.77		D 48.7 0.88
Hall Boulevard	C 24.1 0.83	E 48.1 1.0	D 45.1 0.86
Upper Boones Ferry	C 22.0 0.79	D 32.2 0.97	D 52.0 0.98
72nd /Upper Boones		B 12.0 0.67	
I-5 SB/Carman Dr	D 34.2 0.83	E 42.6 1.0	
I-5 NB/Carman Dr	D 25.9 0.89	D 31.5 0.96	

* 1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 Calculations use 1994 HCM Methodology
1999 Calculations use 1997 HCM Methodology

Unsignalized Intersections

In addition to the signalized intersections along Tigard's key routes, there are a number of unsignalized intersections which are important to traffic operations in Tigard. The table below summarizes the capacity analysis for evening peak conditions at 11 unsignalized intersections in Tigard. These additional intersections, combined with the signalized intersections mentioned above, represent the key study intersections identified by City staff for analysis in this study.[12] Unsignalized intersections are subject to a separate capacity analysis methodology which is described in the appendix of this report.

Of the 11 unsignalized intersections, six are all-way stop controlled and five have one or more approaches which are uncontrolled. The methodology used for each of these cases is different and results are reported slightly differently (please see Appendix for more detail).

PM Peak Hour Intersection Level of Service
Unsignalized Intersections

Intersection	1994 LOS*	1997 LOS*	1999 LOS*
Walnut Street/135th Avenue	A/A	A/B	
Walnut Street/121st Avenue	C	D	
Walnut/Tiedeman/Fonner	B	D	
Main Street/Burnham Street	A/C		
68th Parkway/Atlanta/Haines	C	D	
72nd Avenue/Dartmouth Street	F	F	D
McDonald Street/97th Avenue	A/B		
68th Avenue/Dartmouth Street		D	
Hall/Sattler/Ross		B/E	
Greenburg Road/Oak Street		B/C	
121st Avenue/North Dakota Street		F	

* 1994 Calculations use 1985 Highway Capacity Manual (HCM) Methodology
1997 and 1999 Calculations use 1994 HCM Methodology

Most of the unsignalized intersections that were analyzed operate acceptably at level of service D or above. However, three intersections are shown as level of service E or F. Often poor levels of service at unsignalized intersections affect only a small number of vehicles, since a majority of the vehicles (on the main street) are uncontrolled and flow freely at level of service A or B.

Other Key Routes in Tigard

Interstate 5 is the west coast's major north-south corridor and it provides regional and interstate access directly to the City of Tigard. I-5 connects Tigard with adjoining cities in the Portland Metropolitan Region as well as with cities further south in Oregon such as Salem and Eugene. I-5 also provides access to other states such as Washington and California. ODOT classifies I-5 as an Interstate Highway as part of the National Highway System. For access management it is designated a Freeway.

[12] Per discussions with Laurie Nicholson, City of Tigard staff, December, 1996 and spring 1999.

ORE 217 provides regional access to the City of Tigard. ORE 217 connects Tigard with Beaverton and Lake Oswego and provides access to US 26 and I-5. US 26 is a major route leading to the Oregon Coast to the west and to eastern Oregon. ODOT classifies ORE 217 as a Statewide Highway as part of the National Highway System. For access management it is designated an Expressway.

Gaarde Street is an east-west Major Collector providing local access to residential streets in Tigard. It is two lanes and, in conjunction with 121st Avenue, connects ORE 99W and Scholls Ferry Road via Walnut Street.

Main Street is an east-west Major Collector serving the commercial downtown core of Tigard. It parallels ORE 99W from Johnson Street to Greenburg Road.

Bull Mountain Road serves residential and rural traffic west of Tigard as a Major Collector. This area is developing rapidly and, besides Beef Bend Road, Bull Mountain Road is one of the only roadways accessing this area. In addition, as ORE 99W becomes more congested, both Bull Mountain Road and Beef Bend Road are becoming part of an alternate route to rural areas to the west of Tigard.

McDonald Street is an east-west Major Collector which runs between Hall Boulevard and ORE 99W. It serves predominantly residential traffic, although, as areas to the west in Tigard develop, it is being used more and more as a cut-through route.

121st Avenue is a north-south Major Collector which runs through mostly residential areas in Tigard. In conjunction with Gaarde Street, it connects Scholls Ferry Road with ORE 99W.

North Dakota Street is an east-west Minor Collector which runs through mostly residential areas in Tigard. It connects Scholls Ferry Road to Greenburg Road and generally runs parallel to Scholls Ferry Road.

Beef Bend Road is parallel to, and south of, Bull Mountain Road. It is classified as a Major Collector and functions in a similar way as Bull Mountain Road as growth occurs in the area to the west of Tigard.

Walnut Street is an east-west Major Collector serving primarily residential traffic in Tigard. In conjunction with 135th Avenue, and with a short jog at Tiedeman Avenue, it provides a connection from ORE 99W to Scholls Ferry Road.

Hunziker Street is an east-west Major Collector connecting Hall Boulevard with 72nd Avenue near the ORE 217 ramps. This street serves both commercial and residential traffic and is increasingly being used as a cut-through route across Tigard.

Dartmouth Street is a relatively new Major Collector in Tigard. It is five lanes at its west end and three at its east end. It serves the new Cub Foods and Costco developments and provides direct access to ORE 99W and I-5.

Bonita Road is an east-west Major Collector which connects Hall Boulevard with Lake Oswego (via Bangy Road) and I-5 (via 72nd Avenue and Carman Drive or via Bangy Road and Kruse Way).

Locust Street is an east-west Major Collector which provides access to local neighborhood streets and between Hall Boulevard and Greenburg Road.

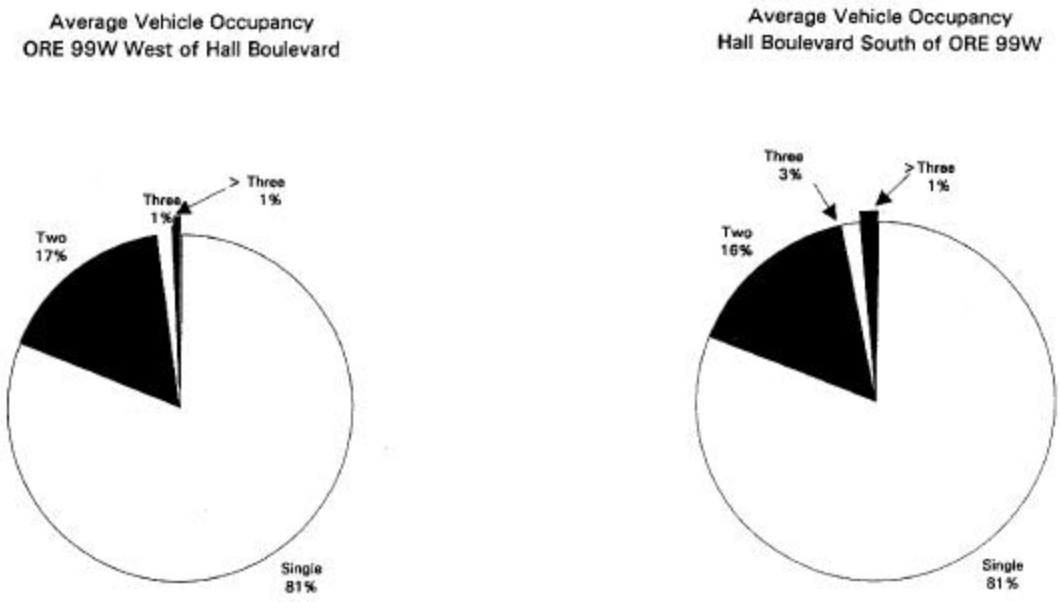
Upper Boones Ferry Road is a north-south Arterial which connects Durham Road with I-5 and Tualatin. Since there is very limited access to Tualatin due to the Tualatin River, much of the traffic between Tigard and Tualatin uses this route.

Taylors Ferry Road is a Major Collector that serves as the northern boundary of the Tigard planning area. This route provides a link between the Metzger area and I-5 and Portland to the east.

AVERAGE VEHICLE OCCUPANCY

Average vehicle occupancy (AVO) was measured at two locations in Tigard.[13] These locations were at **ORE 99W west of Hall Boulevard**, and on **Hall Boulevard south of ORE 99W**. Overall AVO measured in Tigard (between the two locations, over all time periods) was 1.21. This rate is somewhat lower than observed typical ranges for auto occupancy (over all time periods and trip purposes) which range from about 1.31 to 1.54.[14] A breakdown by time period and location is shown in Table 3-3 and the percentage of vehicles by number of passengers and location is shown in Figure 3-12.

Figure 3-12
Average Vehicle Occupancies



[13] Counts conducted for DKS Associates on September 28 through October 6, 1994.

[14] *Calibration and Adjustment of System Planning Models*, U.S. Department of Transportation and Federal Highway Administration, December, 1990, *and Quick-Response Urban Travel Estimation Techniques and Transferable Parameters: User's Guide*, NCHRP Report 187, Transportation Research Board, Washington, D.C., 1978.

Table 3-2
Average Vehicle Occupancy in Tigard

Time	Period	ORE 99W	Hall Blvd	Overall
Weekday				
7:00-9:00 AM	Morning	1.13	1.14	1.13
11:30 AM–1:30 PM	Midday	1.23	1.24	1.23
4:00-6:00 PM	Evening	1.27	1.24	1.26
Overall		**1.21**	**1.21**	**1.21**
Saturday				
1:00-3:00 PM	Midday	1.58	1.54	1.57

ORE 217	Weekday	Northbound	Southbound
7:00-9:00 AM	Morning	1.08	1.08
4:00-6:00 PM	Evening	1.16	1.12

Source: DKS Associates surveys – Tigard Streets 1994, ORE 217 1999.

ACCESS ISSUES

Two major corridors in Tigard are key locations where some form of access management may be applied. These corridors are ORE 99W, which has a significant portion of its frontage occupied by commercial land uses, and Hall Boulevard, which has a large number of access locations for such a major route.

An inventory of driveway conditions along Hall Boulevard was conducted as part of this study. The results of this inventory indicate that access conditions vary greatly along Hall Boulevard. In some segments there are as many as 15 driveways between street intersections. Other segments have as few as zero driveways between street intersections. When adjacent land use was considered, a combination of residential and commercial tended to have the highest number of driveways between streets. A summary of the driveway inventory can be found in the appendix of this report.

LAND USE

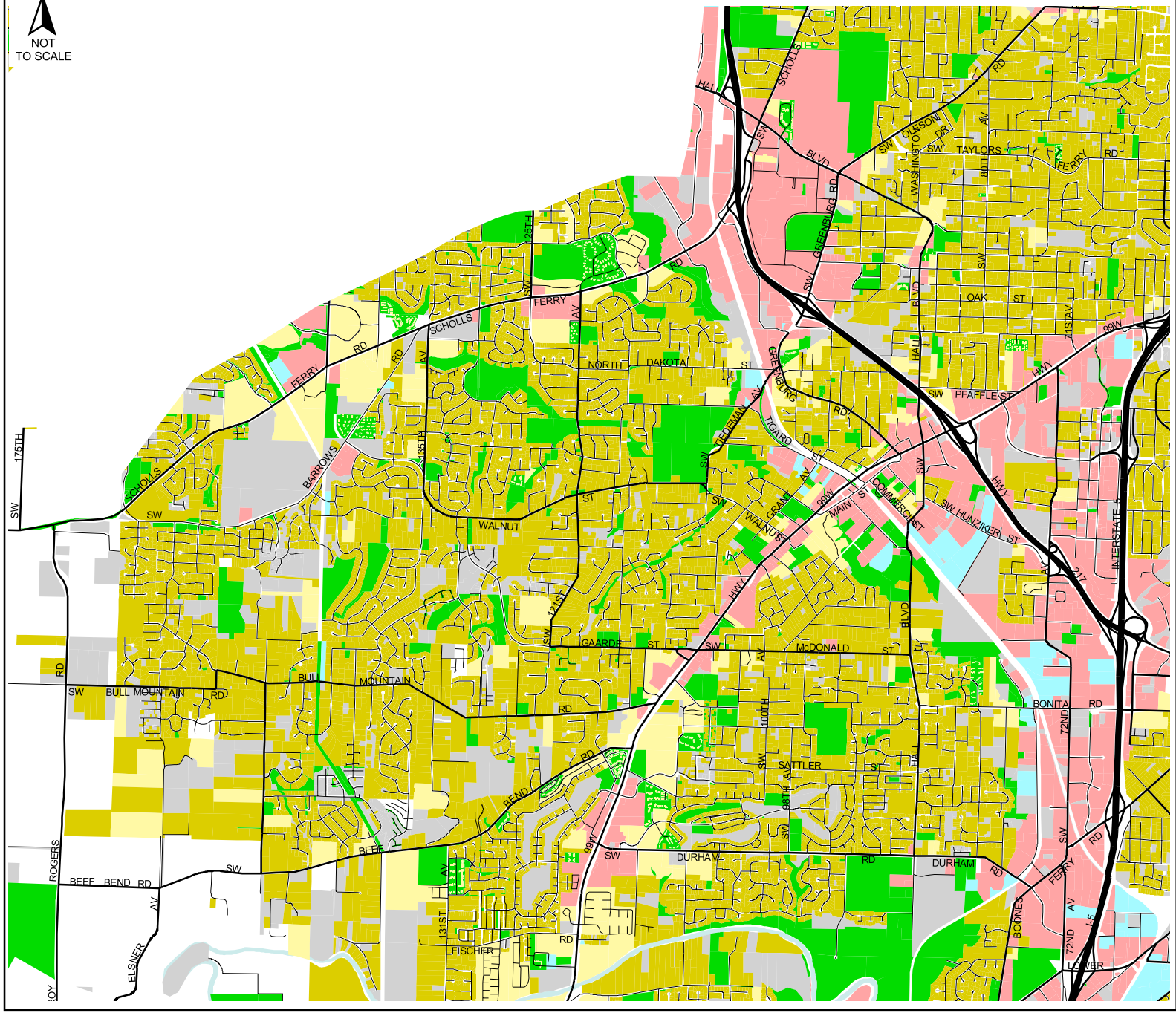
Existing land use in Tigard is shown in Figure 3-13. In general, most retail activity in Tigard is located on arterial and major collector roadways.[15] Although residential development is found on arterial and major collector roadways, much of the residential land uses in Tigard generally have access to minor collector or local streets.

The transportation system is most impacted by changes in land use. Trip generation from added land use has and will create needs for new transportation facilities. The most significant changes in land use which have occurred recently are occurring in the area west of Tigard, in the Tigard Triangle and in the southern and western areas of Tigard.

[15] Tigard City Code requires retail development to gain access from arterial or collector streets.

DKS *Associates*

N
NOT TO SCALE



CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

Existing Land Use

- Commercial
- Industrial
- Multi-Family Residential
- Public
- Single-Family Residential
- Vacant Land

Source: Metro RLIS Database

Figure 3-13
Existing Land Use

TRANSIT

Transit service is provided to the general population of the City of Tigard by Tri-Met. Figure 3-14 shows the routes passing through Tigard. There are two transit centers and two express routes serving Tigard. There are two express routes which have a limited number of stops. Coming from Portland, route 95X stops only at the Tigard Cinemas before it begins making regular stops at Walnut/ORE 99W. Also coming from Portland, route 92X does not stop before reaching the Progress Park & Ride station, where it begins making regular stops. Other routes have stops approximately every 200 feet within Tigard. A comparison of 1990, 1994 and 1999 transit ridership in Tigard is summarized in Table 3-4. No data was available for 1994 for route 38 or for 1990 for route 95. More complete data from 1999 indicates appoximately 9,500 daily transit riders in Tigard[16].

Table 3-4
Daily Transit Ridership in Tigard
1990 , 1994 and 1999

		1990			1994			1999		
Route	**Dir**	**Ons**	**Offs**	**Tot**	**Ons**	**Offs**	**Tot**	**Ons**	**Offs**	**Tot**
12 Barbur	Out	152	683	835	316	941	1257	386	1017	1403
12 Barbur	In	691	160	851	900	254	1154	894	389	1283
38 Boones Ferry	SB	34	33	67				9	37	46
38 Boones Ferry	NB	30	17	47				29	16	45
43 Taylors Ferry	WB	24	110	134	24	127	151	20	158	178
43 Taylors Ferry	EB	109	19	128	109	19	128	148	24	172
44 King City	Out							110	84	194
44 King City	In							19	45	64
45 Garden Home	WB	48	209	257	65	241	306	65	252	317
45 Garden Home	EB	220	47	267	199	66	265	235	71	306
56 Scholls Ferry	SB	1	241	242	3	306	309	3	300	303
56 Scholls Ferry	NB	253	4	257	261	40	301	303	2	305
62 Murray Blvd	EB	24	93	117	43	214	257	94	430	524
62 Murray Blvd	WB	67	24	91	200	58	258	418	107	525
64X Marquam-Tig	Out							4	36	40
64X Marquam-Tig	In							41	1	42
76 Tig-Tual	SB							377	530	907
76 Tig-Tual	NB							552	357	909
78 Beav-LO	SB	224	442	666	275	580	855	252	498	750
78 Beav-LO	NB	434	219	653	562	285	847	419	225	644
92X S. Beav Exp	WB							13	103	116
92X S. Beav Exp	EB							138	10	148
95 Tig I-5 Exp	WB				3	84	87	12	117	129
95 Tig I-5 Exp	EB				64	1	65	104	2	106
							TOTAL	**4645**	**4811**	**9456**

SOURCE: Tri-Met Passenger Census, ons and offs occurring in Tigard.

[16] Route Level Passenger Census, Tri-Met, Spring 1999.

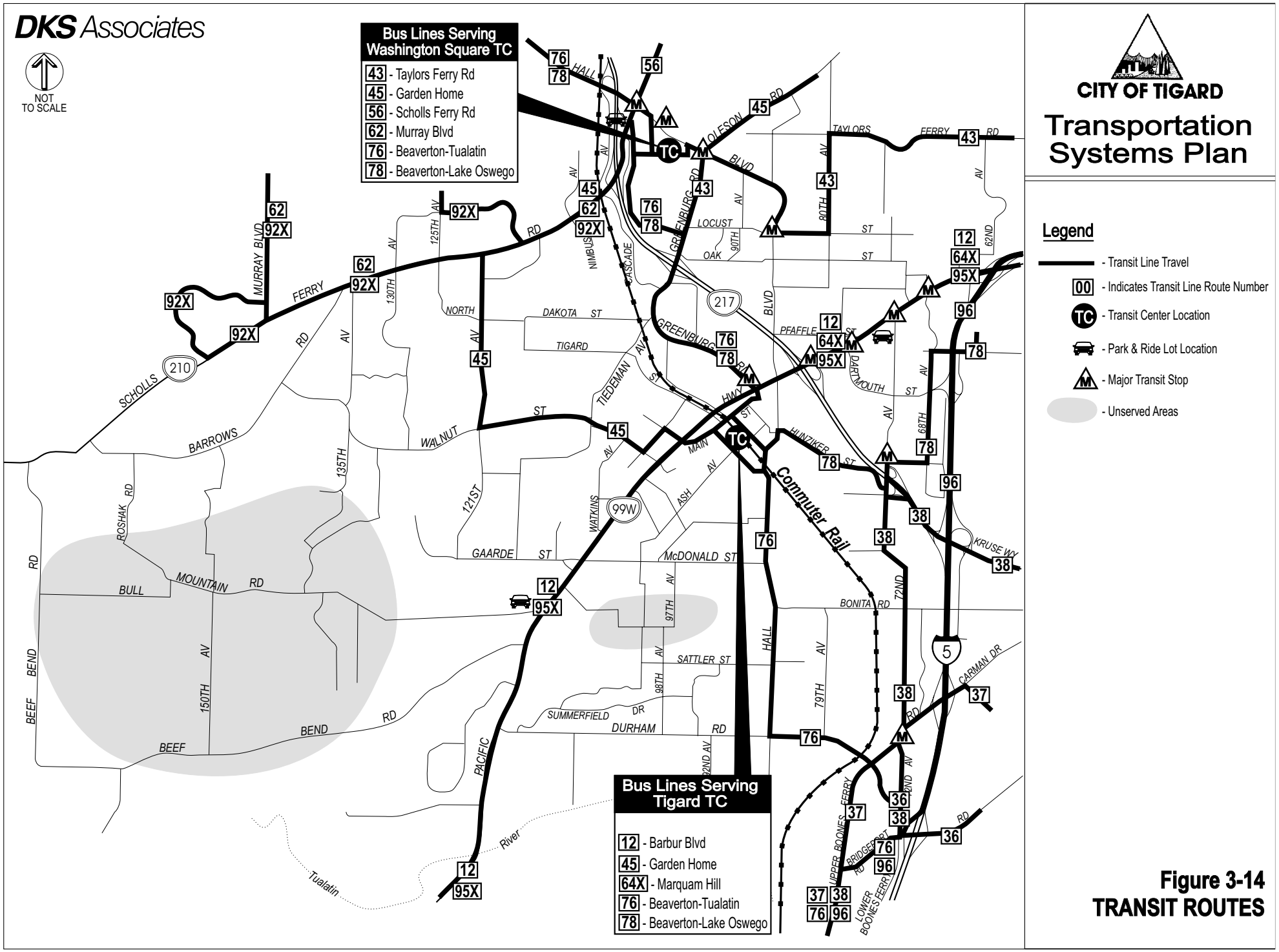


Figure 3-14
TRANSIT ROUTES

BICYCLES

Existing bike lanes and off-street multi-use paths are shown in Figure 3-15. While there is significant inventory of bicycle lanes, most existing lanes are only for short segments. Except for I-5 and ORE 217, bicycles are permitted on all roadways in Tigard. However, because there are few continous and interconnected bikeways in the City, bicycle use is relatively low. Bicycle use in Tigard is generally used for recreational, school and commuting purposes. Bicycle counts at study intersections indicate fewer than 10 bicycle trips at each intersection over a two-hour period of time (either 7-9 AM or 4-6 PM), except at the following intersections, which had between 10 and 15 bicycles in the two hour period:

- Hall Boulevard/McDonald Street (AM peak period)
- Upper Boones Ferry Road/Durham Road (AM and PM peak period)

Metro identifies the following facilities as part of the Regional Bicycle System:

Regional Access	**Regional Corridor (on-street)**	**Community Connector**	**Regional Corridor Off-Street**
• Hall to Greenberg to Main to Hunziker	• Walnut Street • Scholls Ferry Rd • Hall Boulevard • ORE 99W • Hall-Durham-Boones	• 72nd Avenue • Bonita-McDonald • Carman-Durham	• Fanno Creek • Tualatin River • Powerlines • Hunziker to LO through I-5/ORE 217

The adjacent jurisdictions have adopted bicycle maps that provide the opportunity for interconnection between jurisdictions. The Washington County Transportation Plan shows on-street bicycle routes on ORE 99W, Scholls Ferry Road, Hall Boulevard, Greenberg Road, Durham Road, Walnut/Gaarde/McDonald, Oak Street and Locust Street. The County Plan also shows an on-street bicycle route on ORE 217 and I-5 in Tigard (which would be inconsistent with ODOT policy). The powerlines off-street route is the only off-street route shown in Tigard. Using the Transportation Planning Rule criteria, all arterial and collector streets would require bikeways. The City of Portland designates Oleson Road and Barber Boulevard as City Bikeways (which would connect in Tigard to Greenberg Road and ORE 99W). The City of Lake Oswego designates Bonita Road, Carman Drive and Kruse Way as bike lanes or pathways. These routes would link in Tigard to Bonita/McDonald, Carman/Durham and Hunziker (via the ORE 217/I-5 interchange). The City of Beaverton designates Murray Boulevard (which would link to Walnut), Scholls Ferry Road, Barrows Road, 125th Avenue (which would link to North Dakota Street), Nimbus Avenue and Cascade Avenue as bike lanes/bikeways.

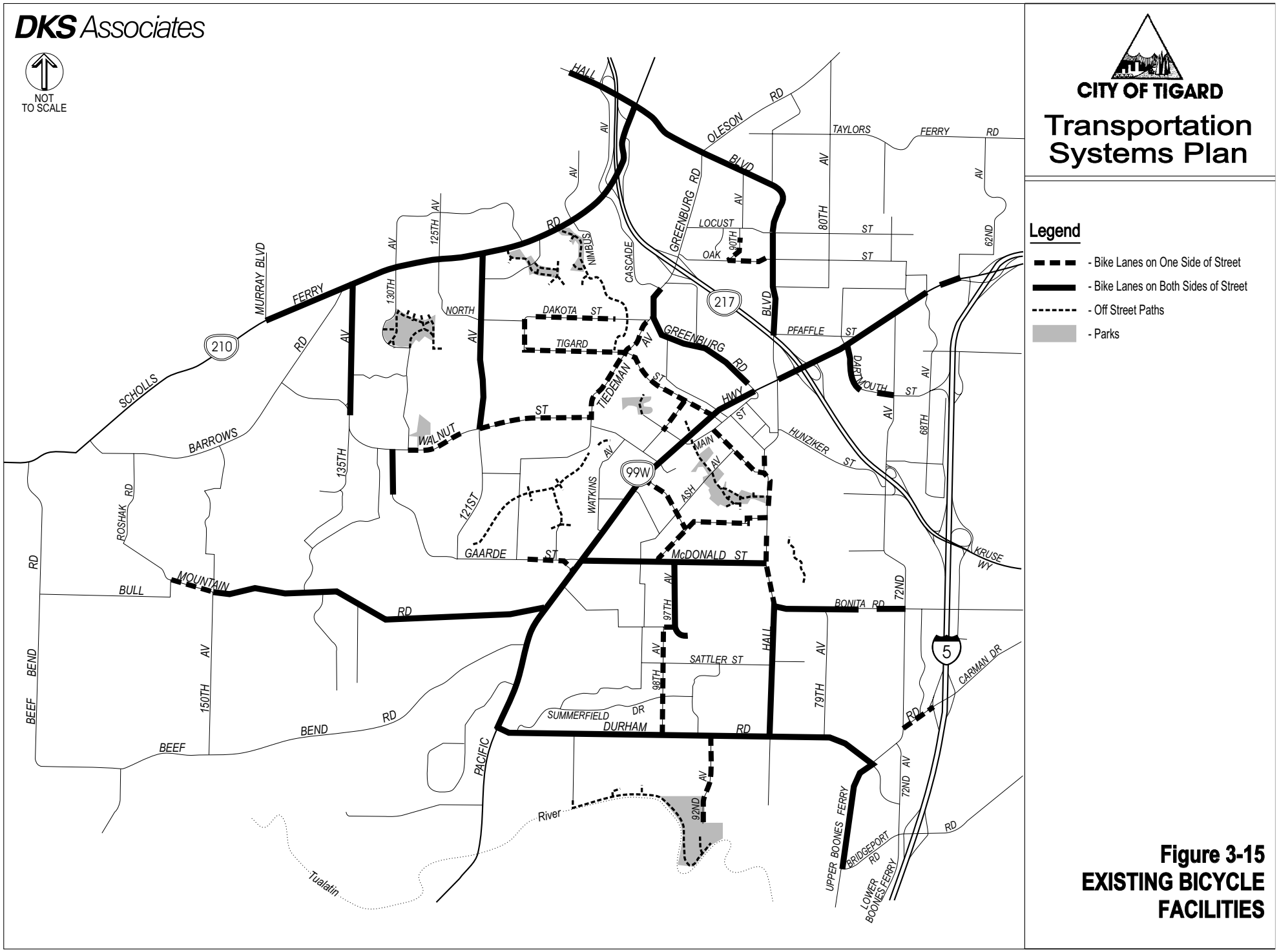


Figure 3-15
EXISTING BICYCLE FACILITIES

PEDESTRIANS

Existing sidewalks are shown in Figure 3-16. A majority of arterial and collector streets in Tigard do not have sidewalks on either side of the street. Connectivity and pedestrian linkages are generally fair to poor on the arterial and collector street system. Although sidewalk availability on the arterial and collector system is poor, many residential streets do have sidewalks, especially in areas developed within the past ten to fifteen years.

Pedestrian counts were conducted during the evening peak period (4:00-6:00 PM) at several key intersections in Tigard. A majority of these intersections had fewer than 10 pedestrians in the PM peak hour. However, there were more than 10 pedestrians at many intersections[17], including the following:

- Hall Boulevard/Sattler Street — 11 pedestrians
- ORE 217 NB Ramps/ORE 99W — 12 pedestrians
- ORE 217 SB Ramps/ORE 99W — 13 pedestrians
- 72nd Avenue/Upper Boones Ferry Road — 13 pedestrians
- Main Street/Johnson Street/ORE 99W — 14 pedestrians
- Hall Boulevard/ORE 99W — 15 pedestrians
- Hall Boulevard/Bonita Road — 18 pedestrians
- 72nd Avenue/Bonita Road — 18 pedestrians
- Dartmouth Street/ORE 99W — 19 pedestrians
- Hall Boulevard/Locust Street — 21 pedestrians
- Greenburg Road/Washington Square Road — 23 pedestrians
- 72nd Avneue/Varns Street/ORE 217 SB — 26 pedestrians
- ORE 99W/Gaarde Street — 37 pedestrians
- ORE 99W/Walnut Street — 50 pedestrians
- ORE 99W/Greenburg Road/Main Street — 54 pedestrians

Sidewalks at least five feet wide are required in all new developments and many new local streets do have sidewalks in the City. Metro has classified several routes in Tigard as part of its Regional Pedestrian System[18]:

Transit/Mixed-Use Corridors	Multi-use Facility with Pedestrian Function	Pedestrian Districts
• ORE 99W	• Fanno Creek	• Washington Square Regional Center
• Hall Boulevard	• Tualatin River	• Tigard Downtown Town Center
• Scholls Ferry Road	• Powerlines	• Murray/Scholls Town Center
• Hunziker Street	• Hunziker to LO	• King City Town Center

[17] Pedestrian volumes represent the number of crossings on all crosswalks combined.
[18] Metro's Regional Pedestrian System map, draft Regional Transportation Plan, 2000.

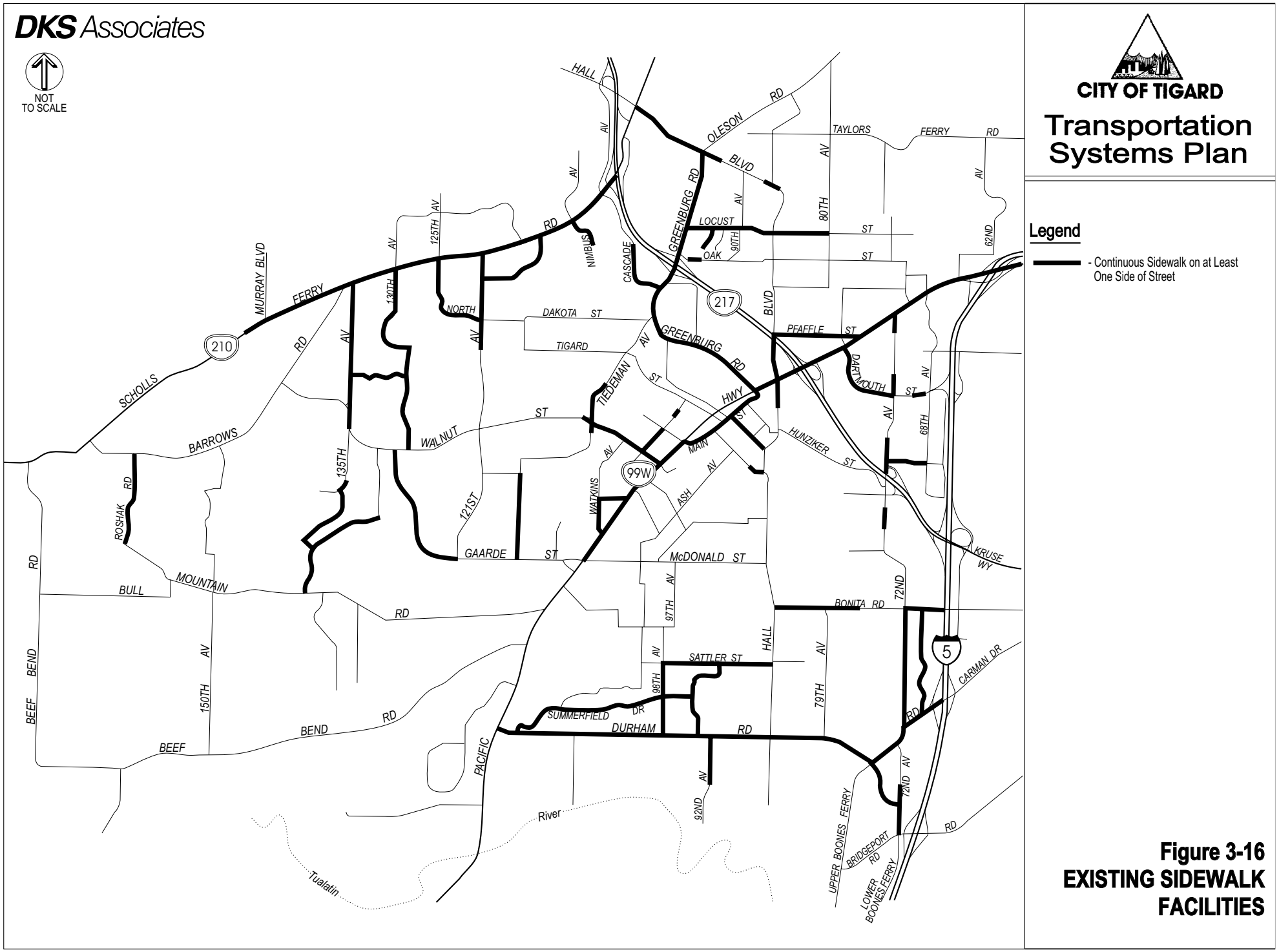


Figure 3-16
EXISTING SIDEWALK FACILITIES

TRUCKS

Principal truck routes in Tigard (as identified by Washington County) include I-5, ORE 217, ORE 99W and some arterial streets. This system provides connections with truck routes serving areas within and outside of Tigard making efficient truck movement and the delivery of raw materials, goods, services and finished products possible. These routes are generally found in and serve areas where there are concentrations of commercial and/or industrial land uses. Figure 3-17 shows truck routes within Tigard. In general, trucks make up about 2-5 percent of the overall traffic at a majority of intersections in Tigard.

RAIL

Railroad tracks traverse Tigard from its northern boundary to the southeast. There are two adjacent but separate tracks south from north of North Dakota Street to Bonita Road. South of Bonita Road, one set of tracks crosses the Tualatin River to Tualatin and the other set of tracks turns east to Lake Oswego. They are both owned by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad.

AIR

Tigard is served by the Portland International Airport, located in Northeast Portland on the Columbia River. The Portland International Airport is a major air transportation and freight facility, which serves Oregon and Southwest Washington. It provides a base for over twenty commercial airlines and air freight operations. The Port of Portland reported that 12.6 million passengers were served at the Portland International Airport in 1997.

Tigard is also served by the Portland-Hillsboro Airport, a general aviation facility located in the north central portion of the City. The airport facility is owned and operated by the Port of Portland as part of the Port's general aviation reliever system of airports. The Port of Portland maintains a Master Plan for this facility which was most recently updated in October, 1996.

WATER

The Tualatin River is located along the southern border of Tigard. It is used primarily for recreational purposes. No policies or recommendations in this area of transportation are provided.

PIPELINE

There are high pressure natural gas feeder lines owned and operated by Northwest Natural Gas Company along several routes in Tigard. Figure 3-18 shows the feeder line routes for Tigard.[19].

[19] Based on the Portland Area Distribution System Map (Dated September, 1998) received from Northwest Natural Gas Company.

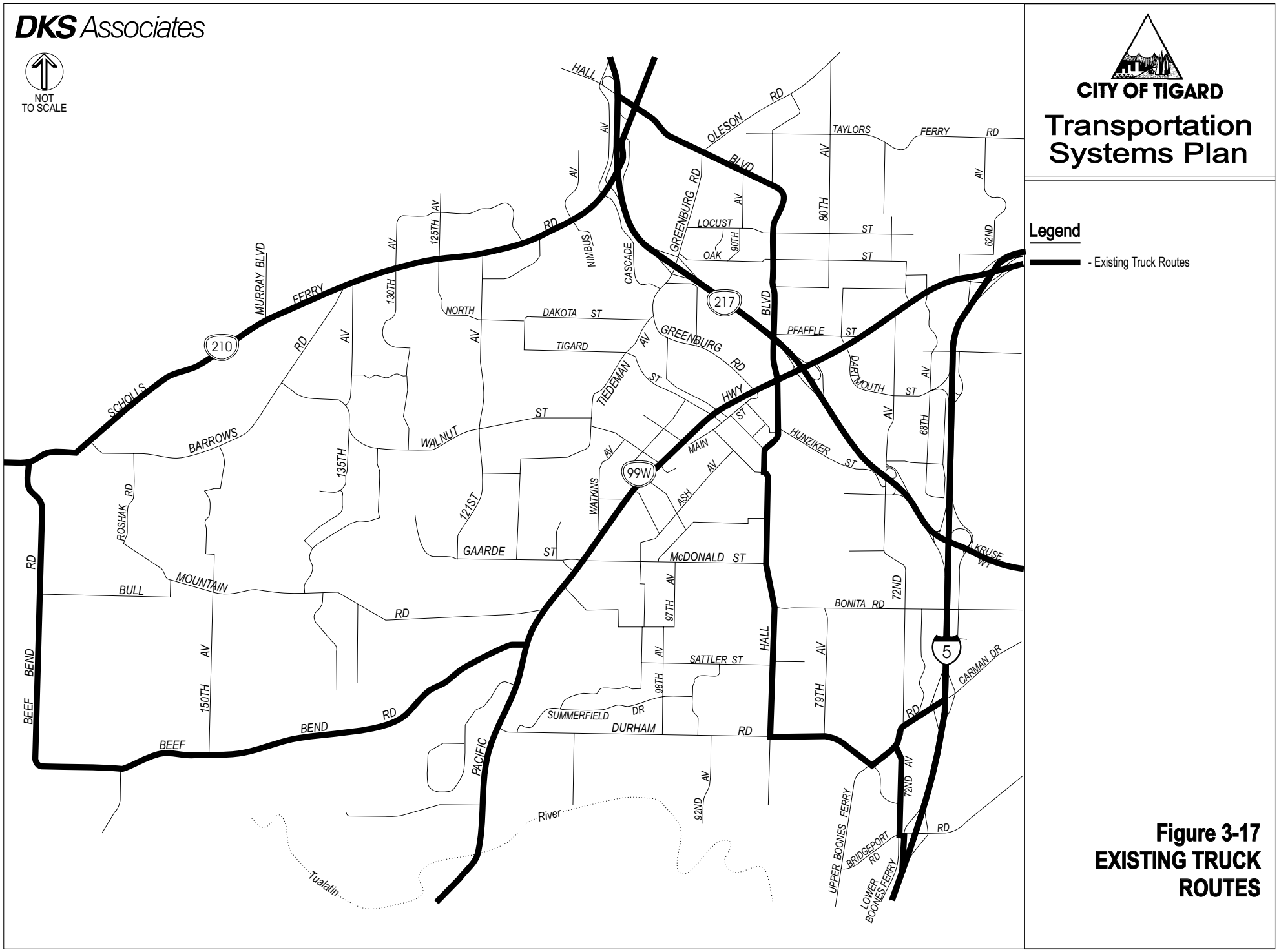


Figure 3-17
EXISTING TRUCK ROUTES

DKS *Associates*

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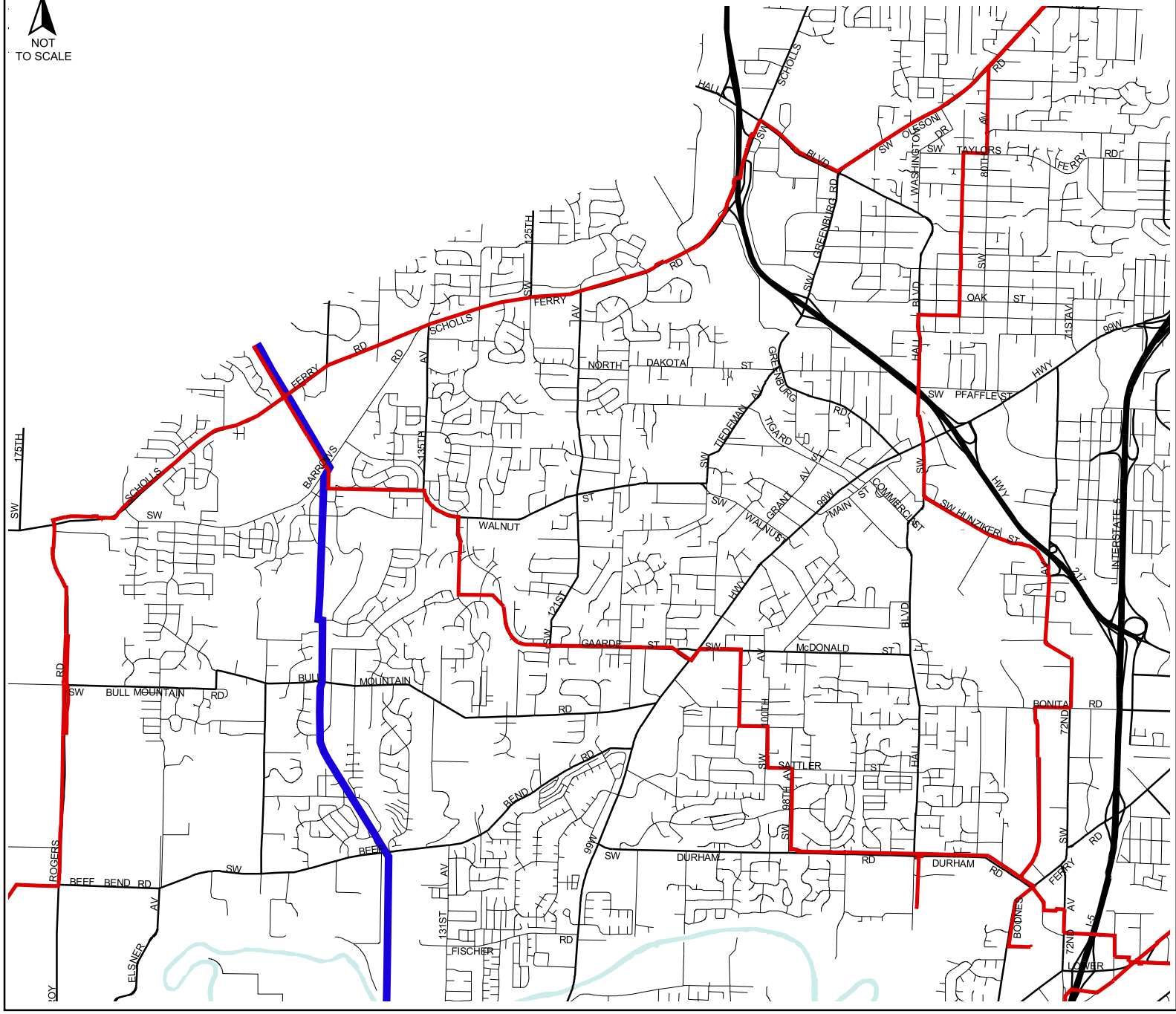

CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Existing High Pressure Gas Pipeline
- Existing Kinder Morgan Pipeline

Figure 3-18
MAJOR PIPELINE ROUTES

Chapter 4
Future Demand and Land Use

This chapter summarizes the methodology used to obtain future year forecasts for various modes in the City of Tigard.

The plan for street improvements within Tigard depends on determining existing needs and needs of future growth. As a first step in assessing future needs, Metro's urban area traffic forecast model and land use forecast for 2015 was identified as a source for determining future traffic volumes in Tigard. This traffic forecast model translates land uses into roadway volume projections. These traffic volume projections form the basis for identifying potential roadway deficiencies and for evaluating alternative circulation improvements. This section describes the forecasting process, including key assumptions and the analysis of the land use scenario developed from the current Comprehensive Plan development designations and allowed densities. Future change of these variables could significantly change the future travel forecast.

The 2015 forecast was refined to include detailed information about Tigard buildout. This 2015 forecast was used for detailed operational analysis[1]. The refined 2015 forecast was used in concert with the updated 2020 Metro forecasts. This chapter compares the land use inputs between refined 2015 and 2020.

PROJECTED LAND USES

Land use is a key factor in how the transportation system operates. The amount of land that is developed, the type of land uses and how the land uses are mixed together have a direct relationship to expected demands on the transportation system. Understanding the amount and type of land use is critical to taking actions to maintain or enhance transportation system operation.

Projected land uses were developed for all areas within the urban growth boundary reflecting the comprehensive plan and Metro's land use assumptions for year 2015. Complete land use data sets were developed for the following conditions:

- Existing Base 1994 Conditions
- Year 2015

The base year model is updated every few years. For this study effort, the available base model provided by Metro was for 1994. Land uses were inventoried throughout Tigard (and the adjacent jurisdictions) by Metro and then again by the City of Tigard (the City conducted a detailed inventory of commercial uses in three key

[1] All references to 2015 in this document refer to the refined Tigard land use 2015 model and its co-use with updated 2020 forecasts.

areas: Tigard Triangle, ORE 99W, Sequoia Parkway area). This land use database includes the number of dwelling units, number of retail employees and number of other employees and is based on Metro's data and was adjusted to reflect the results of the City's inventory. Table 4-1 summarizes the adjusted land uses for existing conditions and the future scenario in the Tigard area.[2] A detailed summary of the land uses for each Transportation Analysis Zone (for both the 1994 and 2015 model years) is included in the appendix. As the land use data is updated in the future, TSP updates can reflect current conditions and new forecasts.

Table 4-1
Tigard Area Adjusted Land Use Summary

Land Use	*1994*	*Modified 2015*	**Growth**	**Percent Increase**
Households	21,765	32,481	10,716	+49%
Retail Employees	9,152	13,257	4,105	+45%
Other Employees	33,553	50,382	16,829	+50%

Source: Metro/City of Tigard

The land use for 2015 used in this study was refined from the base Metro 2015 data. Year 2020 land uses and trip generation were compared to the modified 2015 information. Table 4-2 summarizes the vehicle trip generation for the base 1994 forecast, future 2015 Metro forecast, modified 2015 Tigard forecast and the Metro 2020 forecast. The modified 2015 forecast generated the greatest number of vehicle trips and was used for the TSP. For the detailed study of Tigard streets, the modified 2015 forecast represented near build out, worst case conditions and provides a reasonable assessment of motor vehicle needs within the city (which the forecast was primarily used to determine). More detailed forecasting of the 2020 for regional conditions could be undertaken following this TSP analysis, but it is unlikely (based upon the trip generation) to generate substantially different needs. This would best be undertaken following Metro's adoption of the RTP, and would be a minor update to this TSP.

[2] Based on Metro's 2015 land use forecasts.

Table 4-2
Forecasted Vehicle Trips in Tigard
PM Peak Hour

Scenario	Peak Hour Vehicle Trips
1994 Base Model	34,500
2015 Metro Model	46,000
2020 Metro Model	48,500
2015 Modified Tigard Model	52,600

If land uses are significantly changed in proportion to each other (i.e. there is a significant increase in retail employment relative to households), there will be a shift in the overall operation of the transportation system. Retail land uses generate significantly higher numbers of trips than do households and other land uses. The location and design of retail land uses in a community can greatly affect transportation system operation. Additionally, if a community is homogeneous in land use character (i.e. all employment, all residential), the system must support export of trip making. Typically, there should be both residential type land uses as well as employment type land uses so that some residents may work locally, reducing the need for residents to commute long distances to work. Tigard has a mix of land uses, however, many residents must travel outside the City for employment opportunities.

Table 4-1 indicates that a significant amount of growth is expected in Tigard area in the coming years. These land use quantities should be monitored to make sure that Tigard is working to achieve a balance of land use that is compatible with the available transportation system. This TSP balances transportation needs with the forecasted 2015 land uses.

Transportation Analysis Zones: For traffic forecasting, the land use data is stratified into geographical areas called traffic analysis zones (TAZ's) which represent the sources of vehicle trip generation. There are about 30-40 Metro TAZ's which represent Tigard and its vicinity (Figure 4-1). These 30-40 TAZ's were disaggregated, as part of this plan, into about 130-140 TAZ's to more specifically represent land use in and around Tigard. The original Metro and disaggregated model zone boundaries for Tigard are shown in Figure 4-2. Metro uses EMME/2, a computer based program for transportation planning, to process the large amounts of data for the Portland Metropolitan area.

Land uses were inventoried throughout Tigard by Metro and adjusted to reflect Tigard's more detailed land use inventory in 2015. The adjustments reflected what was termed to be "near buildout". This land use data base includes the number of dwelling units, number of retail employees and number of other employees. Table 4-3 summarizes the land uses for existing conditions and the future scenario by transportation analysis zones (TAZ's).

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CITY OF TIGARD
Transportation System Plan

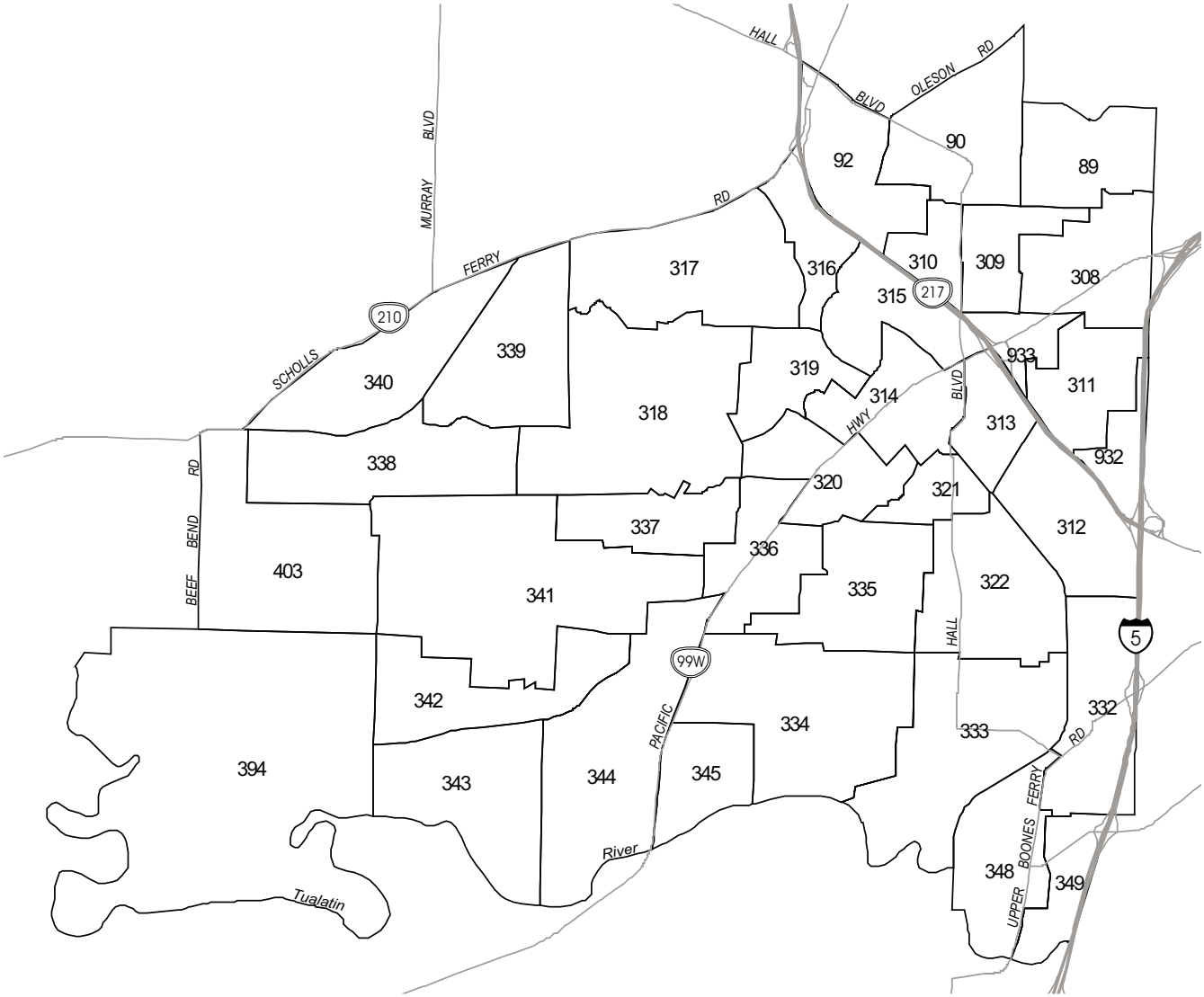

Figure 4-1
METRO TAZ

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Transportation System Plan

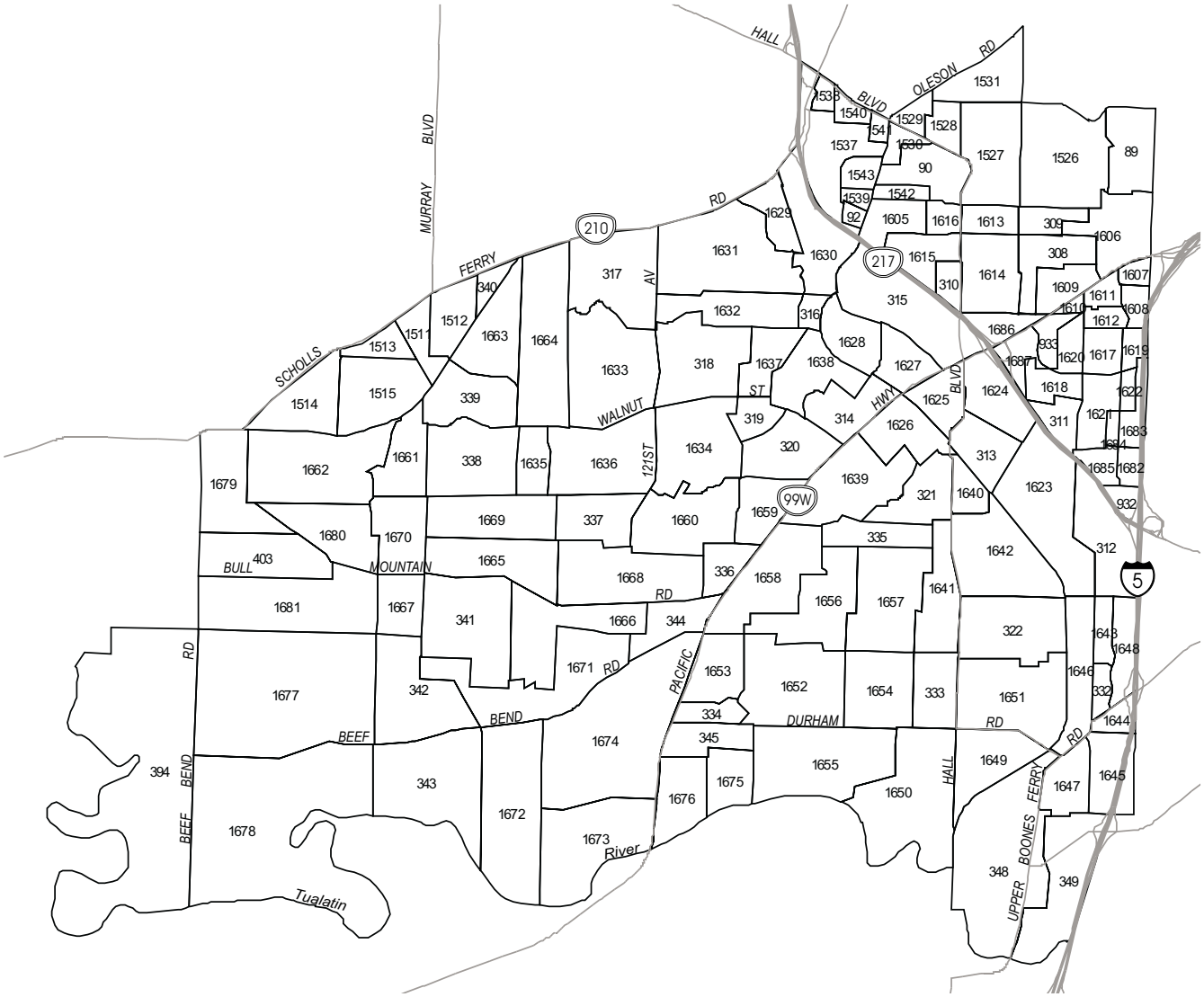

Figure 4-2
DISAGGREGATED TIGARD TAZ

Table 4-3
Tigard Land Use Summary

	Households		*Retail Employees*		*Other Employees*	
TAZ	*1994*	*2015*	*1994*	*2015*	*1994*	*2015*
67	888	958	3	3	61	76
89	191	217	0	0	17	23
90	299	409	3	4	261	489
92	0	9	143	207	273	519
308	185	195	28	28	21	27
309	77	78	1	1	9	11
310	69	96	2	11	4	22
311	33	37	0	400	58	58
312	0	22	12	12	1,193	1,363
313	3	32	62	51	1,208	1,306
314	160	184	24	24	117	147
315	624	825	212	293	647	1,165
316	77	76	22	24	64	91
317	683	705	161	141	955	1,096
318	303	321	0	0	28	33
319	58	68	0	0	7	16
320	225	251	72	72	100	491
321	120	251	0	0	406	416
322	324	158	0	0	433	518
332	0	1	18	18	422	600
333	125	243	0	5	3	42
334	223	262	43	59	69	166
335	86	167	0	1	2	21
336	170	201	63	70	152	219
337	11	206	0	0	7	40
338	66	163	0	0	4	11
339	66	254	1	2	11	46
340	239	309	0	1	0	139
341	199	294	0	0	27	40
342	269	390	6	5	45	60
343	105	265	0	0	0	102
344	92	260	4	15	19	101
345	223	368	331	397	111	174
394	25	26	0	0	17	20
403	81	231	0	1	17	53
932	0	10	42	42	399	941
933	5	9	92	137	40	78
1511	61	194	0	2	0	104
1512	207	374	0	6	0	331
1513	45	130	0	0	0	24
1514	26	503	0	3	0	167
1515	33	178	1	5	41	298
1526	364	517	0	0	39	91

	Households		*Retail Employees*		*Other Employees*	
TAZ	*1994*	*2015*	*1994*	*2015*	*1994*	*2015*
1527	412	487	1	1	87	104
1528	92	130	0	0	12	22
1530	54	146	5	5	496	653
1537	8	115	1,406	2,064	2,686	5,167
1538	97	103	153	149	292	373
1539	0	0	164	142	314	355
1540	25	44	316	418	604	1,048
1541	6	20	78	143	149	357
1542	30	42	152	186	290	467
1543	1	3	52	57	99	144
1605	24	31	1,226	1,084	2,343	2,715
1606	188	241	109	135	80	129
1607	2	10	97	102	71	97
1608	4	22	0	242	168	231
1609	198	236	349	363	110	156
1610	2	18	24	54	18	51
1611	1	29	95	139	70	132
1612	2	45	0	298	170	285
1613	86	93	1	2	8	24
1614	269	308	2	4	26	59
1615	61	92	25	86	38	170
1616	39	63	9	34	14	66
1617	43	61	0	100	188	286
1618	7	37	0	600	41	41
1619	7	13	0	0	116	300
1620	11	16	202	278	44	78
1621	39	77	0	0	165	180
1622	1	16	161	200	54	137
1623	221	323	12	12	2,130	2,800
1624	32	76	61	101	1,189	1,326
1625	206	315	400	500	270	400
1626	269	324	147	250	716	1,019
1627	299	334	36	45	176	283
1628	255	330	20	41	62	162
1629	0	6	73	72	312	368
1630	29	27	131	218	377	830
1631	635	689	89	74	529	573
1632	194	230	22	20	137	162
1633	588	607	0	0	60	64
1634	250	354	0	0	14	46
1635	24	117	0	0	1	27
1636	192	480	0	0	10	93
1637	45	43	1	1	186	182
1638	119	137	0	0	94	131
1639	485	511	283	350	296	375

	Households		*Retail Employees*		*Other Employees*	
TAZ	*1994*	*2015*	*1994*	*2015*	*1994*	*2015*
1640	29	102	0	0	24	101
1641	209	358	0	0	85	141
1642	317	533	0	0	60	407
1643	0	5	42	42	422	502
1644	1	3	26	26	466	466
1645	1	9	113	113	3,001	3,552
1646	2	15	129	129	2,999	3,986
1647	4	11	149	149	500	617
1648	1	26	312	433	317	843
1649	40	75	11	20	76	20
1650	62	112	11	10	76	10
1651	394	521	2	12	14	12
1652	548	655	5	8	26	8
1653	259	446	18	247	95	127
1654	432	467	4	4	19	27
1655	472	520	7	7	33	45
1656	316	402	0	1	5	28
1657	261	404	3	3	53	89
1658	451	584	74	83	177	261
1659	148	172	224	224	128	128
1660	258	310	0	0	96	104
1661	15	106	0	0	3	13
1662	127	466	0	0	4	45
1663	526	689	2	4	32	81
1664	379	522	4	4	56	86
1665	116	277	0	0	22	45
1666	60	312	0	0	11	47
1667	73	112	0	0	9	14
1668	180	307	0	0	24	42
1669	53	259	0	0	2	32
1670	60	114	0	0	11	18
1671	38	362	1	5	12	54
1672	74	223	0	0	18	111
1673	548	645	8	13	39	89
1674	1,717	1,903	186	186	444	489
1675	116	155	13	17	4	7
1676	392	468	23	33	8	14
1677	28	29	0	0	16	18
1678	55	57	0	0	25	29
1679	21	349	0	1	1	69
1680	54	182	0	1	13	46
1681	92	299	0	1	20	71
1682	6	28	35	35	247	600
1683	10	20	60	60	426	569
1684	4	12	29	29	208	241

	Households		*Retail Employees*		*Other Employees*	
TAZ	*1994*	*2015*	*1994*	*2015*	*1994*	*2015*
1685	1	27	64	64	455	700
1686	9	20	257	335	113	191
1687	10	15	87	300	38	69
1688	115	296	2	49	4	82
1689	89	389	0	0	18	248
Tota1	**21,765**	**32,481**	**9,152**	**13,257**	**33,553**	**50,382**

Source: Metro/City of Tigard

A comparison of the modified 2015 land use assumptions to 2020 land use assumptions indicates that the 2020 forecast assumes more households, more retail employees and fewer other employees than the modified 2015 forecast. Key areas where discrepancies occurred were the Washington Square area (more retail employees and fewer other employees in 2020), Downtown (more "other" employees in 2020), Sequoia Parkway area (significantly fewer "other" employees in 2020) and Tigard Triangle (significantly fewer "other" employees in 2020). Detail regarding the trip generation by TAZ is provided in the appendix.

METRO AREA TRAFFIC MODEL

The development of future traffic system needs for Tigard depends on the ability to accurately forecast travel demand resulting from estimates of future population and employment for the City. The objective of the transportation planning process is to provide the information necessary for making decisions on when and where improvements should be made in the transportation system to meet travel demands.

Metro has developed an urban area travel demand model as part of the Regional Transportation Plan Update process to help identify street and roadway needs. Traffic forecasting can be divided into several distinct but integrated components that represent the logical sequence of travel behavior (Figure 4-3). These components and their general order in the traffic forecasting process follow:

- Trip Generation
- Trip Distribution
- Mode Choice
- Traffic Assignment

The initial roadway network used in the traffic model was the existing streets and roadways. Future land use scenarios were tested and roadway improvements were added in to mitigate traffic conditions, using programmed improvements as a starting basis. Forecasts of PM peak hour traffic flows were produced for every major roadway segment within the Tigard area. Traffic volumes are projected on most arterials and collector streets. Some local streets are included in the model, but many are represented by centroid connectors in the model process.

Trip Generation. The trip generation process translates land use quantities (in numbers of dwelling units and retail and other employment) into vehicle trip ends (number of vehicles entering or leaving a TAZ) using trip generation rates established during the model verification process. The trip rates were based upon

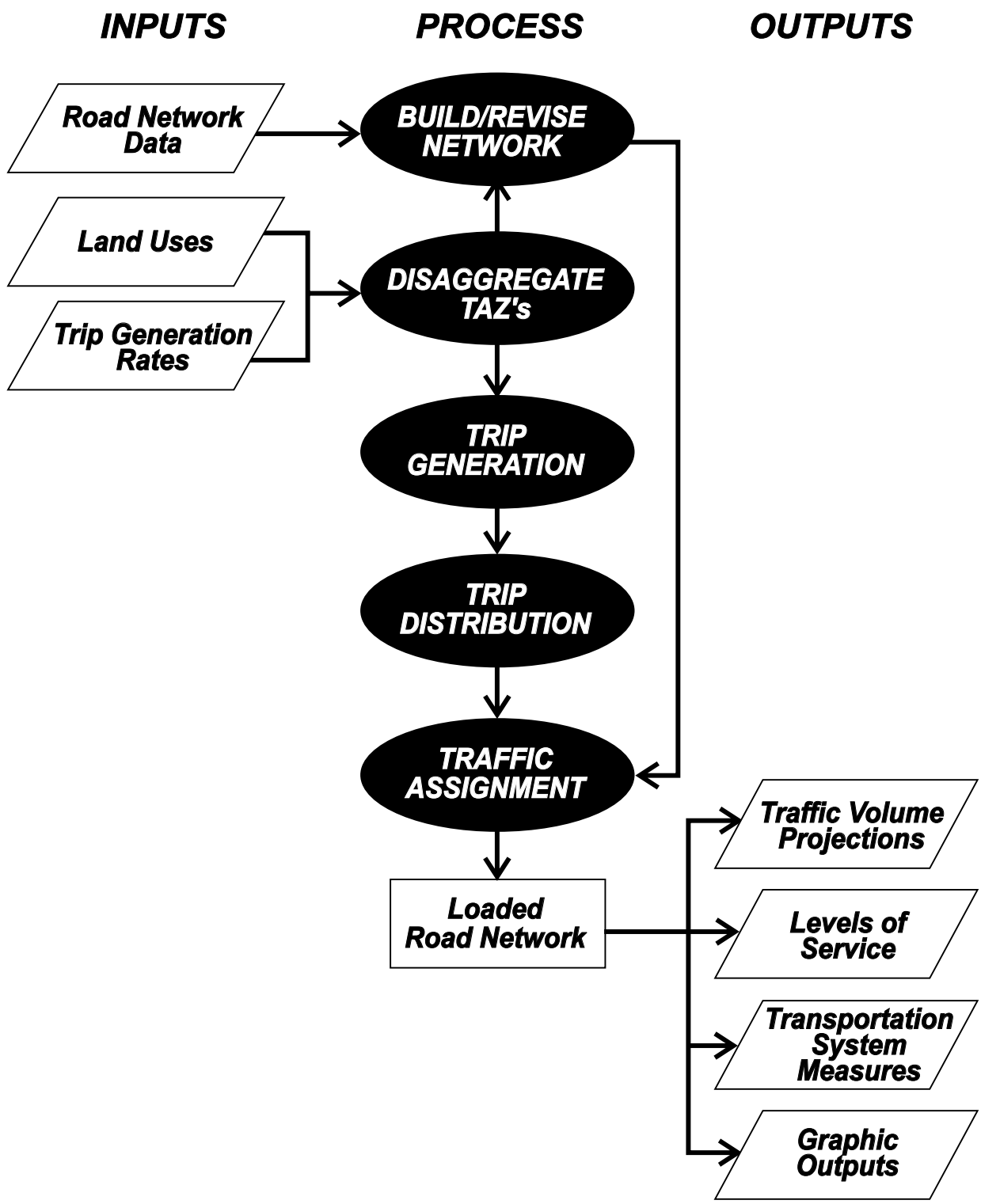

Figure 4-3
TRAFFIC FORECASTING MODEL PROCESS

Institute of Transportation Engineers research[3] and documentation and adjusted to suit the Portland area in the calibration process. PM peak hour trip rates used in the Metro model are summarized in Table 4-4.

Table 4-4
Approximate Average PM Peak Hour Trip Rates Used in Metro Model

	Average Trip Rate/Unit		
Unit	In	Out	Total
Household	0.43	0.19	0.62
Retail Employee	0.78	0.69	1.47
Other Employee	0.07	0.29	0.36

Source: Metro

Table 4-5 illustrates the estimated growth in daily vehicle trips generated within the Tigard, between 1994 and 2015. It indicates that vehicle trip generation in Tigard would grow by approximately 50 percent between 1994 and 2015 if the land develops according to the assumptions made. Assuming a 20 year time horizon to the 2015 scenario, this represents a growth rate of about 2 percent per year.

Table 4-5
Existing and Future Projected External Trip Generation*
PM Peak Hour Vehicle Trips

Trips	*1994*	*Modified 2015*	*2020*	*2015M -1994 Growth*	*Percent Increase*
Tigard Area	34,447	52,606	48,518	18,159	+53%

Source: Metro/City of Tigard
NOTE: * - External trips refer to model trips that exit a Tigard centroid

Trip Distribution. This step estimates how many trips travel from one zone in the model to any other zone. The distribution is based on the number of trip ends generated in each zone pair, and on factors that relate the likelihood of travel between any two zones to the travel time between the zones.

In projecting long-range future traffic volumes, it is important to consider potential changes in regional travel patterns. Although the locations and amounts of traffic generation in Tigard are essentially a function of future land use in the city, the distribution of trips is influenced by growth in neighboring areas such as Portland, Beaverton, Lake Oswego, Tualatin, etc. External trips (trips which have either an origin or destination in Tigard and the other trip end outside Tigard) and through trips (trips which pass through Tigard and have neither an origin nor a destination there) were projected using trip distribution patterns based upon census data and traffic counts performed at gateways into the Metro area UGB.

Mode Choice. This is the step where it is determined how many trips will be by single-occupant vehicle, transit or carpool. The 1994 mode splits would be incorporated into the base model and adjustments to that mode split may be made for the future scenario, depending on any expected changes in transit or carpool use. These considerations are built into the forecasts used for 2015. In the Tigard area, the 2015 model assumes

[3] *Trip Generation Manual*, Institute of Transportation Engineers.

approximately two percent would use transit and average vehicle occupancy would be about 1.24 passengers during the evening peak period.

Traffic Assignment. In this process, trips from one zone to another are assigned to specific travel routes in the roadway network, and resulting trip volumes are accumulated on links of the network until all trips are assigned.

Different models are actually used for auto assignment versus transit assignment. Various techniques exist for auto assignment, such as all-or-nothing, stochastic, incremental capacity restraint and equilibrium capacity restraint. The EMME/2 package, among others, uses the equilibrium capacity restraint technique, which is considered to produce the most realistic network traffic loading of all the techniques. With this technique, the auto trips are assigned iteratively to the network in such a way that the final traffic loading will closely approximate the true network "equilibrium." Network equilibrium is defined as the condition where no traveler can achieve additional travel time savings by switching routes. Between iterations, network travel times are updated to reflect the congestion effects of the traffic assigned in the previous iteration. Congested travel times are estimated using what are called "volume-delay functions" in EMME/2. There are different forms of volume/delay functions, all of which attempt to simulate the capacity restraint effect of how travel times increase with increasing traffic volumes. The volume-delay functions take into account the specific characteristics of each roadway link, such as capacity, speed, and facility type.

Model Verification. The base 1994 modeled traffic volumes were compared against actual traffic counts across screenlines, on key arterials and at key intersections. Most arterial traffic volumes are closely replicated, even down to turn movements by the model based upon detailed calibration. Based on this performance, the model was used for future forecasting and assessment of circulation changes.

MODEL APPLICATION TO TIGARD

Intersection turn movements were extracted from the model at key intersections for both year 1994 and future scenarios. These intersection turn movements were not used directly, but the increment of the future year turn movements over the year 1994 turn movements was applied (added) to existing (actual 1994/1997/1999) turn movement counts in Tigard. Actual turn movement volumes used for future year intersection analysis can be found in the appendix (Level of Service Calculations).

Chapter 5
Pedestrians

This chapter summarizes existing and future pedestrian needs in the City of Tigard, outlines the criteria to be used in evaluating these needs, provides a number of strategies for implementing a pedestrian plan and recommends a pedestrian Action Plan for the City of Tigard. The needs, criteria and strategies were identified in working with the City's TSP Task Force. This committee provided input regarding the transportation system in Tigard, specifically exploring pedestrian needs. The methodology used to develop the pedestrian plan combined citizen and staff input, specific Transportation Planning Rule requirements[1] and continuity to the regional pedestrian network.[2]

NEEDS

A limited number of sidewalks are provided on the arterial and collector roadways (see Figure 3-15) in the City of Tigard, resulting in a fair existing pedestrian network. However, many residential subdivisions in Tigard are relatively new and a majority of them have sidewalks available. A problem exists outside the limits of the new developments where connecting sidewalks often do not exist. Continuity and connectivity are key issues for pedestrians in Tigard since, generally, if there is a sidewalk available, there will be sufficient capacity. In other words, it is more important that a continuous sidewalk be available than that it be of a certain size or type.

The most important existing pedestrian needs in Tigard are providing sidewalks on arterials and collectors and connectivity to key activity centers in the City. This includes the need for safe, well lighted arterial and collector streets. Arterials and collectors can act as barriers to pedestrian movement if safe facilities are not provided. In the future, pedestrian needs will be similar, but there will be additional activity centers that will need to be considered and interconnected.

Walkway needs in Tigard must consider the three most prevalent trip types:

- Residential based trips – home to school, home to home, home to retail, home to park, home to transit, home to entertainment, home to library
- Service based trips – multi-stop retail trips, work to restaurant, work to services, work/shop to transit
- Recreational based trips – home to park, exercise trips, casual walking trips

Residential trips need a set of interconnected sidewalks radiating out from homes to destinations within one-half to one mile. Beyond these distances, walking trips of this type become significantly less common (over 20 minutes). Service based trips require direct, conflict-free connectivity between uses (for example,

1 *Transportation Planning Rule*, State of Oregon, DLCD, Sections 660-12-020(2)(d) and 660-12-045-3.

2 Metro Draft RTP, 1999, Regional Pedestrian System.

a shopping mall with its central spine walkway that connects multiple destinations). Service based trips need a clear definition of connectivity. This requires mixed use developments to locate front doors which relate directly to the public right-of-way and provide walking links between uses within one-half mile. Recreational walking trips have different needs. Off-street trails, well landscaped sidewalks and relationships to unique environmental features (creeks, trees, farmland) are important.

Because all of these needs are different, there is no one pedestrian solution. The most common need is to provide a safe and interconnected system that affords the opportunity to consider the walking mode of travel, especially for trips less than one mile in length.

FACILITIES

Sidewalks should be built to current design standards of the City of Tigard/Washington County and in compliance with the Americans with Disabilities Act (at least four feet of unobstructed sidewalk).[3] Wider sidewalks may be constructed in commercial districts or on arterial streets. Additional pedestrian facilities may include accessways, pedestrian districts and pedestrian plazas, as defined in the *Transportation Planning Rule*:[4]

> *Accessway*: A walkway that provides pedestrian and/or bicycle passage either between streets or from a street to a building or other destination such as a school, park or transit stop.
>
> *Pedestrian District*: A plan designation or zoning classification that establishes a safe and convenient pedestrian environment in an area planned for a mix of uses likely to support a relatively high level of pedestrian activity.
>
> *Pedestrian Plaza*: A small, semi-enclosed area usually adjoining a sidewalk or a transit stop which provides a place for pedestrians to sit, stand or rest.

These designations will be provided as the TSP is implemented. Any pedestrian districts, for example the downtown area (Main Street), may be identified in further studies which address pedestrian issues. In addition, pedestrian issues in *Main Street* and *Town Center* areas (as defined by Metro) should be reviewed in greater detail for pedestrian accessibility, facilities and/or street crossing treatments. The land uses proposed in the *Main Street* and *Town Center* areas will help to promote more pedestrian use. Better pedestrian access should be developed to support and encourage this use.

Sidewalks should be sized to meet the specific needs of the adjacent land uses and needs. Guidance to assess capacity needs for pedestrians can be found in the *Highway Capacity Manual* and *Pushkarev and Zupan*.[5] Typically, the base sidewalk sizing for local and neighborhood routes should be 5 feet (clear of obstruction).

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[3] Americans with Disabilities Act, Uniform Building Code.

[4] Transportation Planning Rule, State of Oregon, Department of Land Conservation and Development, OAR-660-12-005(2, 14 and 15).

[5] Highway Capacity Manual, Special Report 209, Transportation Research Board, 1994; Chapter 13; and Pushkarev, Zupan, Urban Spaces for Pedestrians, 1975.

Pushkarev & Zupan define impeded pedestrian flow occurring at 2 to 6 pedestrians per foot per minute. At this upper level (6 p/f/m) a five foot sidewalk would have peak five minute capacity of 150 pedestrians. There is no location in Tigard with this level of pedestrian activity. While identified as level of service B in the Highway Capacity Manual, no sidewalk in Tigard should exceed 6 pedestrians per foot per minute without widening. The critical element of this analysis is the effective width of walkway. Because of street utilities and amenities, a five foot walkway can be reduced to two feet of effective walking area. This is the greatest capacity constraint to pedestrian flow. Therefore, landscape strips should be considered on all walkways to reduce the impact of utilities and amenities – retaining the full sidewalk capacity.

As functional classification of roadways change, so should the design of pedestrian facilities. Collectors may need to consider minimum sidewalk widths of 6 to 8 feet and arterials should have sidewalk widths of 6 to 10 feet. Wider sidewalks may be necessary depending upon urban design needs and pedestrian flows (for example, adjacent to storefront retail or near transit stations). Curb-tight sidewalks are generally acceptable at the local and neighborhood route classification, however, with high vehicle volumes and on collector/arterial streets, landscape strips between the curb and the sidewalk should be required. Where curb-tight sidewalks are the only option, additional sidewalk width must be provided to accommodate the other street side features (light poles, mail boxes, etc… potentially an additional 3 to 4 feet).

CRITERIA

Tigard's TSP Task Force created a set of goals and policies to guide transportation system development in Tigard (see Chapter 2). Several of these policies pertain specifically to pedestrian needs:

Goal 1

Policy 2 *Encourage pedestrian accessibility by providing safe, secure and desirable pedestrian routes.*

Goal 2

Policy 1 *Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use.*

Policy 4 *Sidewalks must be constructed on all streets within Tigard (with construction or reconstruction projects). All schools, parks, public facilities and retail areas shall have direct access to a sidewalk.*

Policy 5 *Bicycle and pedestrian plans shall be developed which link to recreational trails.*

Policy 6 *Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections.*

Goal 3

Policy 3 *Safe and secure pedestrian and bicycle ways shall be designed between parks and other activity centers in Tigard.*

Policy 4 *Safe and secure routes to schools shall be designated for each school and any new residential project shall identify the safe path to school for children*

Goal 5

Policy 1 *Design and construct transportation facilities to meet the requirements of the Americans with Disabilities Act.*

These goals and policies are the criteria that all pedestrian improvements in Tigard should be compared against to determine if they conform to the intended vision of the City.

STRATEGIES

Several strategies were evaluated by the TSP Task Force for future pedestrian projects in Tigard. These strategies aimed at providing the City with priorities to direct its funds toward pedestrian projects that meet the goals and policies of the City:

Strategy 1 - "Fill in Gaps in the Network Where Some Sidewalks Exist"

This strategy provides sidewalks which fill in the gaps between existing sidewalks where a significant portion of a pedestrian corridor already exists. This strategy maximizes the use of existing pedestrian facilities to create complete sections of an overall pedestrian network.

Strategy 2 – "Connect Key Pedestrian Corridors to Schools, Parks, Recreational Uses and Activity Centers"

This strategy provides sidewalks leading to activity centers in Tigard, such as schools and parks. This strategy provides added safety on routes to popular pedestrian destinations by separating pedestrian flow from auto travel lanes. These routes are also common places that children may walk, providing them safer routes. A key element of this strategy is to require all new development to define direct safe pedestrian paths to parks, activity centers, schools and transit (in the future) within one mile of the development site. Direct will be defined as 1.25 times the straight line connection to these points from the development. Any gaps (off-site) will be defined (location and length).

Strategy 3 – "Coordination of Land Use Approval Process to Provide Sidewalks & Links to Existing Sidewalks"

This strategy uses the land use approval process to ensure that sidewalks are provided adjacent to new development and that links from that new development to existing sidewalks are evaluated. If there are existing sidewalks in close proximity, either the developer or the City will be required to extend the sidewalk adjacent to the new development to meet the existing nearby sidewalk. The development shall use the pedestrian master plan as a basis for determining adjacent sidewalk placement. To effectively implement this strategy, close proximity shall be determined to be within 300 feet of the proposed development. In addition, if extension is not found to be roughly proportional to the development, the City Shall add this to future years CIP consideration list.

Strategy 4 – "Improved Crossings"

This strategy focuses on ensuring that safe street crossing locations are available, particularly along

high traffic volume streets or locations where there is a lot of pedestrian traffic (i.e. adjacent to schools, activity centers, etc.)

Strategy 5 – "Pedestrian Corridors that Connect to Major Recreational Uses"

This strategy provides a connection between the sidewalk network and major recreational facilities, such as the Greenway Trail, the the Fanno Creek Trail and other recreational uses.

Strategy 6 – "Pedestrian Corridors that Connect to Major Transit Locations"

This strategy provides sidewalks leading to major transit facilities, such as bus stops which service a high volume of riders. This strategy increases pedestrian safety and encourages transit use.

Strategy 7 – "Pedestrian Corridors that Connect Neighborhoods"

This strategy puts priority on linking neighborhoods together with pedestrian facilities. This can include walkways at the end of cul-de-sacs and direct connections between neighborhoods (avoiding "walled" communities).

Strategy 8 - "Reconstruct All Existing Substandard Sidewalks to City of Tigard Standards"

This strategy focuses on upgrading any substandard sidewalks to current city standards. Current standards are for five foot sidewalks to meet ADA[6] requirements. Several sidewalks exist that do not meet the minimum five foot requirement. Fronting property owners are responsible for sidewalk maintenance where pavement has fallen into disrepair.

Strategy 9 – "Pedestrian Corridors that Commuters Might Use"

This strategy focuses on providing sidewalks in areas where commuters might walk. For example, connecting neighborhoods to large employment areas (i.e Washington Square Regional Center or the Tigard Triangle).

Table 5-1 lists each strategy in the order it was ranked by the committee and provides an assessment of how each of the strategies meets the requirements of each of the goals and policies.

[6] *Americans with Disabilities Act*, Uniform Building Code.

Table 5-1
Pedestrian Facility Strategies Comparisons

Strategy	Policies 1-2	2-4	2-5	2-6	3-3	3-4	5-1
1. Fill in gaps in network where some sidewalks exist	◖	◖	❍	❍	◖	◖	❍
2. Connect pedestrian corridors to schools, parks, activity centers	◖	●	◖	◖	●	●	◖
3. Coordination of land use approval process to provide sidewalks & links to existing	◖	◖	❍	◖	❍	◖	◖
4. Improved crossings	●	◖	❍	◖	◖	◖	◖
5. Pedestrian corridors that connect to major recreational uses	◖	◖	●	❍	◖	◖	◖
6. Pedestrian corridors that connect to major transit locations	◖	◖	❍	◖	❍	❍	◖
7. Pedestrian corridors that connect neighborhoods	◖	❍	❍	◖	❍	◖	❍
8. Reconstruct substandard sidewalks to City standards	❍	◖	❍	❍	●	❍	◖
9. Pedestrian corridors commuters might use	◖	●	❍	◖	❍	◖	◖

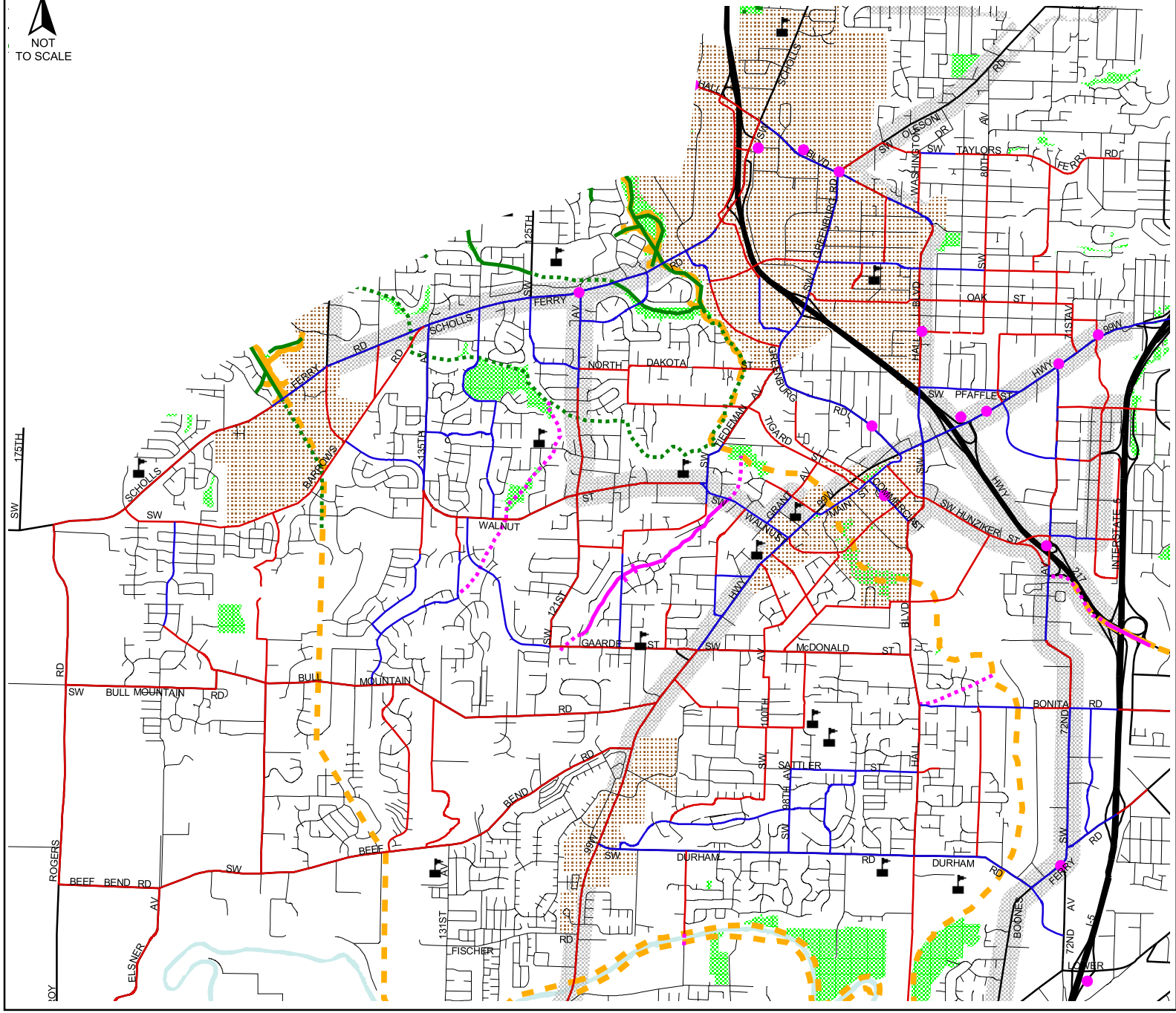
✖ Does not meet criteria ◖ Mostly meets criteria
❍ Partially meets criteria ● Fully meets criteria

RECOMMENDED PEDESTRIAN FACILITY PLAN

The strategies that had been evaluated by the TSP Task Force were ranked by each member of the committee according to his or her vision of priorities for the City of Tigard. The ranking of these strategies is listed in Table 5-1 from most important to least important. Three strategies were considered to be a high priority for pedestrians in Tigard and ranked significantly higher than the remaining strategies. These strategies were filling in network gaps, connections to schools, parks and activity centers and coordination of land use approval process to provide sidewalks and links to existing sidewalks.

DKS *Associates*

N
NOT TO SCALE



CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- RTP Major Transit Stop
- Schools
- RTP Transit/Mixed Use Corridor
- RTP Pedestrian Districts

Parks
- Existing Park

Tigard Off-Street Multi-Use Paths
- Proposed
- Existing

THRPD Trails
- Existing
- Proposed

RTP Regional Corridor Off-Street Regional Multi-Use Path
- Existing
- Proposed

Sidewalks
- Existing (Continuous on at Least One Side - Future Both Sides)
- Proposed (Both Sides)

Figure 5-1
PEDESTRIAN MASTER PLAN

A list of likely actions to achieve fulfillment of these priorities was developed into a Pedestrian Master Plan. The Pedestrian Master Plan (Figure 5-1) is an overall plan and summarizes the "wish list" of pedestrian-related projects in Tigard. From this Master Plan, a more specific, shorter term, Action Plan was developed.

The Action Plan consists of projects that the City should give priority to in funding. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

It is preferable to provide pedestrian facilities on one side of the street if it means a longer section of the system could be covered (i.e. sidewalk on one side of the street for two miles is preferable to sidewalk on both sides of the street for one mile). In the case of significant stretches where sidewalk is only provided on one side of the road, particular emphasis should be placed on developing safe crossing locations. Development shall still be responsible for any frontage improvements, even if a pedestrian facility already exists opposite the proposed development. Sidewalks on both sides of all streets is the ultimate desire.

POTENTIAL PROJECT LIST

Table 5-2 outlines potential pedestrian projects in Tigard. The City, through its Capital Improvement Program (CIP), joint funding with other agencies (Washington County, Metro) and development approval would implement these projects. The following considerations should be made for each sidewalk installation:

- Every attempt should be made to meet City standards
- All sidewalks should be a minimum of five feet wide
- Landscape strips should be considered and are encouraged (see standard street cross-sections in Motor Vehicles chapter)

Action Plan Projects

Figure 5-2 and Table 5-2 summarize the Pedestrian Action Plan.

Table 5-2
Potential Pedestrian Projects

Rank*	Project	From	To
Action Plan Projects			
H	Taylor's Ferry Rd	Washington Drive	62nd Avenue
H	Washington Drive	Hall Boulevard	Taylor's Ferry Road
H	Hall Boulevard	Scholls Ferry Road	Pfaffle Street
H	Dartmouth Street	72nd	68th Avenue
H	72nd Avenue	ORE 99W	Bonita Road
H	72nd Avenue	Carman/Upper Boones Ferry	Durham Road
H	Hunziker Street	Hall Boulevard	72nd Avenue
H	Hall Boulevard	North of Hunziker Street	South City Limits
H	Bonita Road	West of 72nd Avenue	72nd Avenue
H	McDonald Street	ORE 99W	Hall Boulevard
H	ORE 99W	McDonald Street	South City Limits
H	Beef Bend Road	ORE 99W	Scholls Ferry Road
H	Bull Mountain Road	ORE 99W	Beef Bend Road
H	Roshak Road	Bull Mountain Road	Scholls Ferry Road
H	Barrows Road	Scholls Ferry Road (West)	Scholls Ferry Road (East)
H	Walnut Street	135th Avenue	Tiedeman Avenue
H	Gaarde Street	Walnut Street	ORE 99W
H	121st Avenue	Gaarde Street	North Dakota Street
H	North Dakota Street	121st Avenue	Greenburg Road
H	Tiedeman Avenue	Walnut Street	Greenburg Road
H	Tigard Street	115th Avenue	Main Street
H	Burnham Street	Main Street	Hall Boulevard
H	Fonner Street	Walnut Street	121st Avenue
H	Commercial Street	Main Street	Lincoln Street
H	Oak Street (RTP 6019)	Hall Boulevard	80th Avenue
Other Potential Projects			
M	80th Avenue	Taylor's Ferry Road	Spruce Street
M	Spruce Street	Hall Boulevard	80th Avenue
M	Oak Street	Greenburg Road	Hall Boulevard
M	Oak Street	80th Avenue	71st Avenue
M	Locust Street	80th Avenue	72nd Avenue
M	74th Avenue	Taylor's Ferry Road	South of Barbara Lane
M	72nd Avenue	North of Locust Street	Oak Street
M	Spruce Street	78th Avenue	71st Avenue
M	71st Avenue	Oak Street	ORE 99W
M	78th Avenue	Spruce Street	ORE 99W

Rank*	Project	From	To
M	Pine Street	71st Street	69th Street
M	69th Street	Pine Street	ORE 99W
M	90th Avenue	Hall Boulevard	Locust Street
M	62nd/61st Avenues	Taylor's Ferry Road	Pomona Street
M	Pomona Street	61st Avenue	64th Avenue
M	64th Avenue	Pomona Street	ORE 99W
M	68th Avenue	ORE 99W	South of Hampton Street
M	66th Avenue	South of Hampton Street	Dartmouth Street
M	Hampton Street	68th Avenue	66th Avenue
M	Haines Street	68th Avenue	Tigard City Limits
M	Shady Lane	Greenburg Road	95th Avenue
M	95th Avenue	Shady Lane	Greenburg Road
M	98th Avenue	Greenburg Road	Main Street
M	115th Avenue	North Dakota Street	Tigard Street
M	Cascade Avenue	Scholls Ferry Road	Existing sidewalk
M	Johnson Street	ORE 99W	End
M	Grant Avenue	Johnson Street	Tigard Street
M	Scoffins Street	Main Street	Hall Boulevard
M	Ash Avenue	Commercial Street	Scoffins Street
M	Ash Avenue	McDonald Street	Burnham Street
M	Frewing Street	ORE 99W	O'Mara Street
M	Garrett Street	ORE 99W	Ash Avenue
M	O'Mara Street	McDonald Street	Hall Boulevard
M	97th Avenue	McDonald Street	Murdock Street
M	Murdock Street	97th Avenue	103rd Avenue
M	103rd Avenue	Murdock Avenue	Canterbury Lane
M	Canterbury Lane	103rd Avenue	ORE 99W
M	100th Avenue	McDonald Street	Highland Drive
M	Highland Drive	100th Avenue	Summerfield Drive
M	Sattler Street	100th Avenue	98th Avenue
M	98th Avenue	Sattler Street	Murdock Avenue
M	Ross Street	Hall Boulevard	East End
M	79th Avenue	Durham Road	Bonita Road
M	108th Avenue	Durham Road	South End
M	133rd Avenue	Bull Mountain Road	South End
M	Peachtree Drive	Bull Mountain Road	South End
M	150th Avenue	Bull Mountain Road	Beef Bend Road
M	135th Avenue	Walnut Street	Hillshire Drive
M	Hillshire Drive	135th Avenue	Mistletoe Drive

Rank*	Project	From	To
M	Mistletoe Drive	Hillshire Drive	Benchview Terrace
M	Benchview Terrace	White Cedar Place	Bull Mountain Road
M	132nd Avenue	Walnut Street	Benchview Terrace
M	Menlor Lane	Barrows Road	Sunrise Lane
M	Sunrise Lane	Menlor Lane	150th Avenue
M	150th Avenue	Sunrise Lane	Bull Mountain Road
M	Washington Square Regional Center	Pedestrian Improvements (RTP 6022)	
M	Tiedeman Avenue	Walnut Street	Existing Sidewalk to North
M	Watkins Avenue	Park Street	Walnut Street
M	Off-Street Multi-Use Path	Tualatin River Crossing at approximately 108th Avenue	
M	Off-Street Multi-Use Path	I-5/ORE 217 Kruse Way Bridge linkage to 72nd Avenue south of ORE 217	
M	Off-Street Multi-Use Path	Powerline Corridor/Tualatin River/Fanno Creek/Greenway Park Loop	

- H=High, M=Medium, L=Low Priority

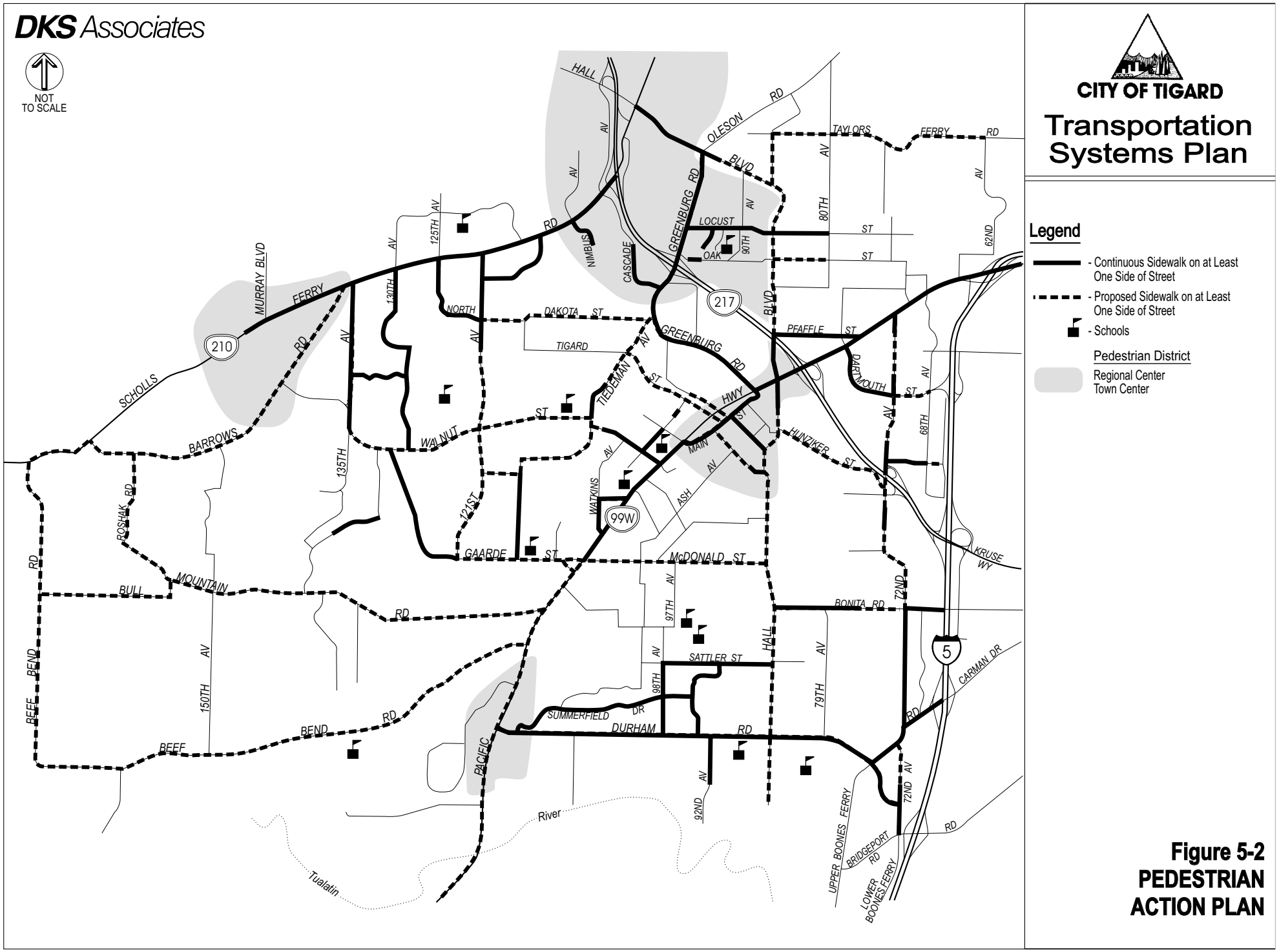


Figure 5-2
PEDESTRIAN ACTION PLAN

Complementing Land Development Actions

Land use actions are where significant improvements to the pedestrian system can occur. Basically a change in land use from vacant or under utilized land creates two key impacts to the pedestrian system:

1. Added vehicle trips that conflict with pedestrian flows
2. Added pedestrian volume that requires safe facilities

These impacts require mitigation to maintain a safe pedestrian system. Pedestrians walking in the traveled way of motor vehicles are exposed to potential conflicts that can be minimized or removed entirely with sidewalk installation. The cost of a fronting sidewalk to an individual single family home would be about $1,000 to $2,000 (representing less than one percent of the cost of a house). Over a typical 50 year life of a house this would represent less than $50 per year assuming the cost of money is 4% annually. This cost is substantially less than the potential risk associated with the cost of an injury accident or fatality without safe pedestrian facilities (injury accidents are likely to be $10,000 to $50,000 per occurrence and fatalities are $500,000 to $1,000,000). Sidewalks are essential for the safety of elderly persons, the disabled, transit patrons and children walking to school, a park or a neighbor's home. No area of the city can be isolated from the needs of these users (not residential, employment areas or shopping districts). Therefore, fronting improvements including sidewalk are required on every change in land use or roadway project.

For any developing or redeveloped property in Tigard, the benefit of not providing sidewalks is only the cost savings to the developer – at the potential risk and future expense to the public. Therefore, sidewalks are required in Tigard with all new development and roadway projects.

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing pedestrian facilities in as direct manner as possible. As a guideline, the sidewalk distance from the building entrance to the public right-of-way should not exceed 1.25 times the straight line distance. If a development fronts a proposed sidewalk (as shown in the Pedestrian Master Plan), the developer shall be responsible for providing the walkway facility as part of any frontage improvement required for mitigation of development.

It is also very important that residential developments consider the routes that children will use to walk to school and provide safe and accessible sidewalks to accommodate these routes, particularly within one mile of a school site. Additionally, all commercial projects generating over 1,000 trip ends per day should provide a pedestrian connection plan showing how pedestrian access to the site links to adjacent uses, the public right-of-way and the site front door. Conflict free paths and traffic calming elements should be identified, as appropriate.

Address Gaps in Pedestrian System

Many of the areas developed in Tigard 10 to 25 years ago did not provide sidewalks. With as much of the City built-out (as is the case today) there are limited opportunities for development to create major portions of the missing pedestrian system. The historic gaps in the pedestrian walking system become more important as land development and activity grow creating new demands for an integrated pedestrian system. Current land developments build sidewalks on project frontages, but have little means or incentive to extend sidewalks beyond their property. Property owners without sidewalks are unlikely to independently build sidewalks that do not connect to anything. In fact, some property owners are resistant to sidewalk

improvements due to cost (they do not want to pay) or the impact to their frontage (they may have landscaping in the public right-of-way). As an incentive to fill some of these gaps concurrent with development activities, the City could consider an annual walkway fund that would supplement capital improvement-type projects. A fund of about $40,000 to $50,000 per year could build over a quarter mile of sidewalk to help fill gaps. If matching funds were provided, over double this amount may be possible. The fund could be used several ways:

- Matching other governmental transportation funds to build connecting sidewalks identified in the master plan.
- Matching funds with land use development projects to extend a developer's sidewalks off-site to connect to non-contiguous sidewalks (especially with residential development and its access to schools and parks, commercial development linking retail (ie deli, bank, ..) with employment)
- Supplemental funds to roadway projects which build new arterial/collector sidewalks to create better linkages into neighborhoods.
- Matching funds with adjacent land owners that front the proposed sidewalk.
- Reimbursement agreements with developers

Parks and Trails Development

The City Parks and Recreation Department and Metro Greenspaces programs are responsible for the majority of off-street trail opportunities. These two agencies must coordinate their pedestrian plans to provide an integrated off-street walking system in Tigard. Recent Metro Greenspaces initiatives and City park projects provide an opportunity to implement the off-street trails in Tigard as an integrated element of the pedestrian action plan. The Fanno Creek Trail and Powerlines trail systems are already well developed north of Tigard in Beaverton. Because of the regional nature of the interconnected powerlines to Tualatin River to Fanno Creek trail system, Tigard will need to work cooperatively with Metro, Washington County, Tualatin Hills Parks and Recreation District and the City of Beaverton.

Safety

Pedestrian safety is a major issue. Pedestrian conflicts with motor vehicles are a major issue in pedestrian safety. These conflicts can be reduced by providing direct links to buildings from public rights-of-way, considering neighborhood traffic management (see Chapter 8: Motor Vehicles), providing safe roadway crossing points and analyzing/reducing the level of pedestrian/vehicle conflicts in every land use application.

In setting priorities for the pedestrian action plan, school access was given a high priority to improve safety. However, beyond simply building more sidewalks, school safety involves education and planning. Many cities have followed guidelines provided by Federal Highway Administration and Institute of Transportation Engineers. Implementing plans of this nature has demonstrated accident reduction benefits. However, this type of work requires staffing and coordination by the School District as well as the City to be effective.

Several "pedestrian crossing evaluation" locations were identified on the Pedestrian Master Plan and on the Pedestrian Action Plan. These are locations where it may be desirable (where warrants are met) to install a pedestrian activated signal for the sole purpose of allowing pedestrians to cross the roadway.

2040 Coordination

Metro has designated three areas within Tigard as 2040 land use designated pedestrian districts. These areas will require the greatest attention to the development of integrated pedestrian networks. The three areas include:

- Washington Square Regional Center
- Downtown Tigard Town Center/Main Street/Commuter Rail Station Area
- King City Town Center

The City of Tigard has developed a plan for the Washington Square Regional Center which is in the final approval process. While not a 2040 land use designated area, the Tigard Triangle has special development code regulation in Tigard that pertain to pedestrian design. Plans will need to be developed for both the Tigard Downtown and King City. The areas designated on Figures 5-1 and Figure 5-2 are the pedestrian districts in Tigard.

Chapter 6
Bicycles

This chapter summarizes existing and future facility needs for bicycles in the City of Tigard. The following sections outline the criteria to be used to evaluate needs, provide a number of strategies for implementing a bikeway plan and recommend a bikeway plan for the City of Tigard. The needs, criteria and strategies were identified in working with the City's TSP Task Force. As part of the TSP Task Force, the Planning Commission provided input regarding the transportation system in Tigard, specifically exploring bicycle needs. The methodology used to develop the bicycle plan combined citizen and staff input, specific Transportation Planning Rule requirements[1] and continuity to the regional bicycle system.[2]

Metro's *Draft Regional Transportation Plan (RTP)* has identified a Proposed Regional Bicycle Network. As such, these routes will eventually have bicycle lanes, if they don't already. The following Tigard streets are classified as follows in the RTP:

Regional Access	**Regional Corridor (on-street)**	**Community Connector**	**Regional Corridor Off-Street**
• Hall to Greenburg to Main to Hunziker	• Walnut Street • Scholls Ferry Rd • Hall Boulevard • ORE 99W • Hall-Durham-Boones	• 72nd Avenue • Bonita-McDonald • Carman-Durham	• Fanno Creek • Tualatin River • Powerlines • Hunziker to LO through I-5/ORE 217

NEEDS

Continuous bikeways are currently only provided for the full length of Durham Road, McDonald Street and Tigard Street in the City of Tigard. Bikeways are also currently provided for significant portions of ORE 99W, Hall Boulevard, Bonita Road, 97th/98th Avenues, Greenburg Road, Walnut Street, 121st Avenue and Bull Mountain Road. In addition, there are a few segments where bikeways do exist where new development and roadway improvements have occurred. Continuity and connectivity are key issues for bicyclists and the lack of facilities (or gaps) cause significant problems for bicyclists in Tigard. Without connectivity of the bicycle system, this mode of travel is severely limited (similar to a road system full of cul-de-sacs). The TPR[3] calls for all arterial and collector streets to have bicycle facilities. To meet the TPR requirements and fill in existing gaps in the existing bicycle system, an action plan that focuses on a framework system should be developed to prioritize bicycle investment.

1 Transportation Planning Rule, State of Oregon, DLCD, Section 660-12-020(2)(d), 660-12-035(3)(e), 660-12-095(3)(b & c).

2 Regional Bicycle System Map, Regional Transportation Plan Draft, Metro, 1999.

3 Oregon Administrative Rules, Chapter 660, Division 12, Section 045(3).

Bicycle trips are different from pedestrian and motor vehicle trips. Common bicycle trips are longer than walking trips and generally shorter than motor vehicle trips. Where walking trips are attractive at lengths of a quarter mile (generally not more than a mile), bicycle trips are attractive not only for these short trips, but lengths of two to three miles. Bicycle trips can generally fall into three groups: commuters, activity-based and recreational. Commuter trips are typically home/work/home (sometimes linking to transit) and are made on direct, major connecting roadways and/or local streets. Bicycle lanes provide good accommodations for these trips. Activity based trips can be home-to-school, home-to-park, home-to-neighborhood commercial or home-to-home. Many of these trips are made on local streets with some connections to the major functional classification streets. Their needs are for lower volume/speed traffic streets, safety and connectivity. It is important for bicyclists to be able to use through streets[4]. Recreational trips share many of the needs of both the commuter and activity-based trips, but create greater needs for off-street routes, connections to rural routes and safety. Typically, these bike trips will exceed the normal bike trip length.

FACILITIES

Bicycle facility needs fall into two primary categories: route facilities and parking facilities. Bicycle lanes are the most common route facilities in Tigard. Racks, lockers and shelters are typical bicycle parking facilities that are provided at individual land use sites. Bicycle ways can generally be categorized as bike lanes, bicycle accommodation, or off-street bike paths/multi-use trails. Bike lanes are areas within the street right-of-way designated specifically for bicycle use. Federal research has indicated that bike lanes are the most cost effective and safe facilities for bicyclists when considering all factors of design. Bicycle accommodations are where bicyclists and autos share the same travel lanes, including a wider outside lane and/or bicycle boulevard treatment (priority to through bikes on local streets). Multi-use paths are generally off-street routes (typically recreationally focused) that can be used by several transportation modes, including bicycles, pedestrians and other non-motorized modes (i.e. skateboards, roller blades, etc.). The term bikeway is used in this plan to represent any of the bicycle accommodations described above. The bicycle plan designates where bike lanes and multi-use paths are anticipated and any other bicycleways are expected to be bike accommodations (i.e. shared with motor vehicles).

Bicycle lanes adjacent to the curb are preferred to bicycle lanes adjacent to parked cars or bicycle lanes combined with sidewalks. Six foot bicycle lanes are recommended. Provision of a bicycle lane not only benefits bicyclist but also motor vehicles which gain greater shy distance/emergency shoulder area and pedestrians which gain buffer between walking areas and moving vehicles. On reconstruction projects, bicycle lanes of five feet may need to be considered. Bicycle accommodations can be provided by widening the curb travel lane (for example, from 12 feet to 14 or 15 feet. This extra width makes bicycle travel more accommodating and provides a greater measure of safety). Off-street trails should be planned for 12 feet in width, desirable for mixed-up activity (ped and bike). Signing and marking of bicycle lanes should follow the *Manual on Uniform Traffic Control Devices*, as adopted for Oregon. Design features in the roadway can improve bicycle safety[5]. For example, using curb storm drain inlets rather than catch basins significantly improves bicycle facilities.

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4 This can include end of cul-de-sac connections, but even better is regular spacing of local streets.

5 Oregon Bicycle and Pedestrian Plan, ODOT, June, 1995; this provides an in-depth discussion on bicycle network development.

Bicycle parking is required in Tigard for new land use applications (see Development Code Section 18.765, Table 18.765.2 Minimum and Maximum Required Off-street Vehicle and Bicycle Parking) Requirements in Community Development Code Section 18.765.050 outline the design and placement of bicycle parking (within 50 feet of building entrance).

CRITERIA

Tigard's TSP Task Force created a set of goals and policies to guide transportation system development in Tigard (see Chapter 2). Several of these policies pertain specifically to bicycle needs:

Goal 2 *Policy 3 Bicycle lanes must be constructed on all arterials and collectors within Tigard (with construction or reconstruction projects). All schools, parks, public facilities and retail areas shall have direct access to a bikeway.*

Policy 5 Bicycle and pedestrian plans shall be developed which link to recreational trails.

Policy 6 Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections.

Goal 3 *Policy 3 Safe and secure pedestrian and bikeways shall be designed between parks and other activity centers in Tigard.*

These goals and policies are the criteria that all bikeway improvements in Tigard should be measured against to determine if they conform to the intended direction of the City. Policy 2-3 sets a specific requirement that bicycle lanes be constructed on all arterials and collectors within Tigard consistent with the Bicycle Master Plan and that all schools, parks, public facilities and retail areas have direct access to a bikeway. Table 6-1 summarizes the bicycle corridors created by overlaying the bicycle network over the arterial and collector system in Tigard.

Since bicyclists can generally travel further than pedestrians, connections that lead to regional destinations such as Portland, Beaverton, Tualatin and Lake Oswego are important. Tigard's bicycle network should connect to Washington County's, Beaverton's, Tualatin's and Lake Oswego's bicycle networks and be consistent with the Regional Bicycle System. Key locations where connections should be made to these other jurisdiction's networks are shown in Table 6-2.

STRATEGIES

Several strategies were considered for construction of future bikeway facilities in Tigard. These strategies were studied to provide the City with priorities since it is likely that the available funding will be insufficient to address all of the projects identified in the Bikeway Master Plan.

Strategy 1 - "Fill in Gaps in the Network where Some Bikeways Exist"

This strategy provides bikeways which fill in the gaps between existing bikeways where a significant portion of a bikeway corridor already exists. This strategy maximizes the use of existing bicycle facilities to create complete sections of an overall bikeway network. Examples would include ORE 99W, Hall Boulevard, Bull Mountain Road, Greenburg Road and 121st Avenue, where short segments would complete routes.

Table 6-1
Corridors in Proposed Bikeway Network

North-South Corridors	East-West Corridors	
Beef Bend Road	Taylor's Ferry Road	Walnut Street
121st Avenue	Barrows Road	Bull Mountain Road
Greenburg Road	Nimbus/Oak Street	Beef Bend Rd./Durham Rd./ Carman Drive
ORE 99W	North Dakota/Greenburg/ Hunziker	Gaarde St/McDonald St./ Bonita Road
Hall Boulevard	Pfaffle/Dartmouth Street	
72nd Avenue		

Table 6-2
Bicycle Connectivity to Adjacent Jurisdictions

City	Interface Street	Link Included in Tigard Master Plan?
Lake Oswego	Haines Street	Atlanta
	Kruse Way multi-use pathway	Hunziker
	Bonita Road	Bonita
	Carman Drive	Carman
Beaverton	Scholls Ferry Road	Scholls Ferry
	Barrows Road	Barrows
	Powerlines multi-use path	Powerlines off-street path
	Murray Boulevard	Walnut
	Davies Road	Barrows
	125th Avenue	North Dakota
	Nimbus Avenue	Nimbus to Locust
	Hall Boulevard	Hall
Portland	Taylors Ferry	Taylors Ferry
	Barbur Boulevard	ORE 99W
	Oleson Road	Greenburg
Tualatin	Tualatin Road/Boones Ferry Rd.	Hall Boulevard
	Upper Boones Ferry Road	Upper Boones Ferry
	Lower Boones Ferry Road	72nd
Washington County	Elsner Road	Beef Bend

Strategy 2 – "Connect Key Bicycle Corridors to Schools, Parks and Activity Centers (public facilities, etc.)"

This strategy provides bikeway links to schools, parks, recreational facilities and activity centers from the arterial/collector bikeway network. This alternative provides added safety to likely bicyclist destinations as well as destinations where children are likely to travel. Examples would include Hall Boulevard, Durham Road, Walnut Street, Tiedeman Avenue, Bull Mountain and the off-street multi-use paths throughout Tigard.

Strategy 3 – "Develop Bicycle Network on Flat Routes"

This strategy focuses on providing bicycle lanes on "flat" routes, or those routes without significant grade changes. This strategy provides bicycle facilities where a larger percentage of the population is likely to travel. Examples would include routes such as Walnut Street, Hall Boulevard, Durham Road, North Dakota Street, etc.

Strategy 4 – "Develop a Bike Sign Program—Focus on Low Volume Streets"

This strategy would provide signs to guide bicyclists to appropriate bicycle routes in the City

Strategy 5 – "Bicycle Corridors that Connect to Major Recreational Facilities"

This strategy provides a connection between the bikeway network and major recreational facilities, such as the Greenway Trail. Examples would be the Greenway Trail, Fanno Creek Trail and the proposed powerline corridor in the western part of the City.

Strategy 6 – "Develop Maintenance Program to Clean Bike Lanes"

This strategy establishes a program to provide maintenance services to clean the bike lanes. Debris in bike lanes is one of the biggest complaints (deterrents) of bicyclists.

Strategy 7 – "Bicycle Corridors that Commuters Might Use"

This strategy focuses on providing bicycle facilities where commuters are likely to go such as local (within Tigard) or regional (i.e. Beaverton, Tualatin, Lake Oswego or downtown Portland) employment centers or leading to transit which provides access to regional employment centers. Examples would include ORE 99W, Scholls Ferry Road and Hall Boulevard.

Strategy 8 - "Bicycle Corridors that Connect Neighborhoods"

This alternative puts priority on bicycle lanes for routes which link neighborhoods together. Some of these could include paths crossing parks, schools or utility rights-of-way.

Strategy 9 – "Construct All Bikeways to City of Tigard/Washington County Standards"

This strategy focuses on upgrading any substandard existing bikeways to current city/county standards. Current standards are for six foot wide bike lanes with appropriate striping and signs for bicycle safety.

Strategy 10 – "Bicycle Corridors that Access Commercial Areas"

This strategy puts priority on bicycle lanes for arterials/collectors which provide access to commercial areas within the City. Examples would include ORE 99W, 72nd Avenue, Dartmouth Street and Hall Boulevard.

Table 6-3 summarizes the strategies in the priority order ranked by the TSP Task Force in terms of meeting the transportation goals and objectives.

Table 6-3
Bikeway Facility Strategies Comparisons

		Policies			
Strategy		**2-3**	**2-5**	**2-6**	**3-3**
1.	Fill in gaps in the network where some bikeways exist	◖	❍	❍	❍
2.	Connect key bicycle corridors to schools, parks and activity centers (public facilities, etc.)	◖	◖	◖	●
2.	Develop bicycle network on flat routes	❍	❍	◖	◖
3.	Develop a bike sign program—focus on low volume streets	❍	❍	❍	◖
4.	Bicycle corridors that connect to major recreational facilities	◖	●	◖	◖
5.	Develop maintenance program to clean bike lanes	✖	✖	✖	✖
7.	Bicycle corridors that commuters might use	◖	❍	❍	❍
8.	Bicycle corridors that connect neighborhoods	❍	❍	◖	❍
8.	Construct all bikeways to City of Tigard standards	❍	❍	❍	❍
10.	Bicycle corridors that access commercial areas	◖	❍	◖	◖

✖ Does not meet criteria ◖ Mostly meets criteria
❍ Partially meets criteria ● Fully meets criteria

ALTERNATIVES

Two basic alternative bicycle networks were developed through the TSP Task Force discussion. The first option was to place bicycle lanes on every existing arterial and collector street. Figure 6-1 summarizes the All Arterial and Collector alternative. The end result is several redundant bicycle facilities on routes that will no longer be collectors or arterials in the new functional classification. Additionally the cost and right-of-way impact is so significant that this alternative may be difficult to successfully implement. A second alternative was developed by the TSP Task Force that is build upon a framework of bicycle lanes through Tigard. This alternative provides framework grids of bicycle lanes with fewer lanes identified on lower classification streets (which typically have lower traffic volumes). Based upon the highest priority strategies the TSP Task Force recommended the framework option as the Tigard Bicycle Master Plan (Figure 6-2).

RECOMMENDED BIKEWAY FACILITY PLAN

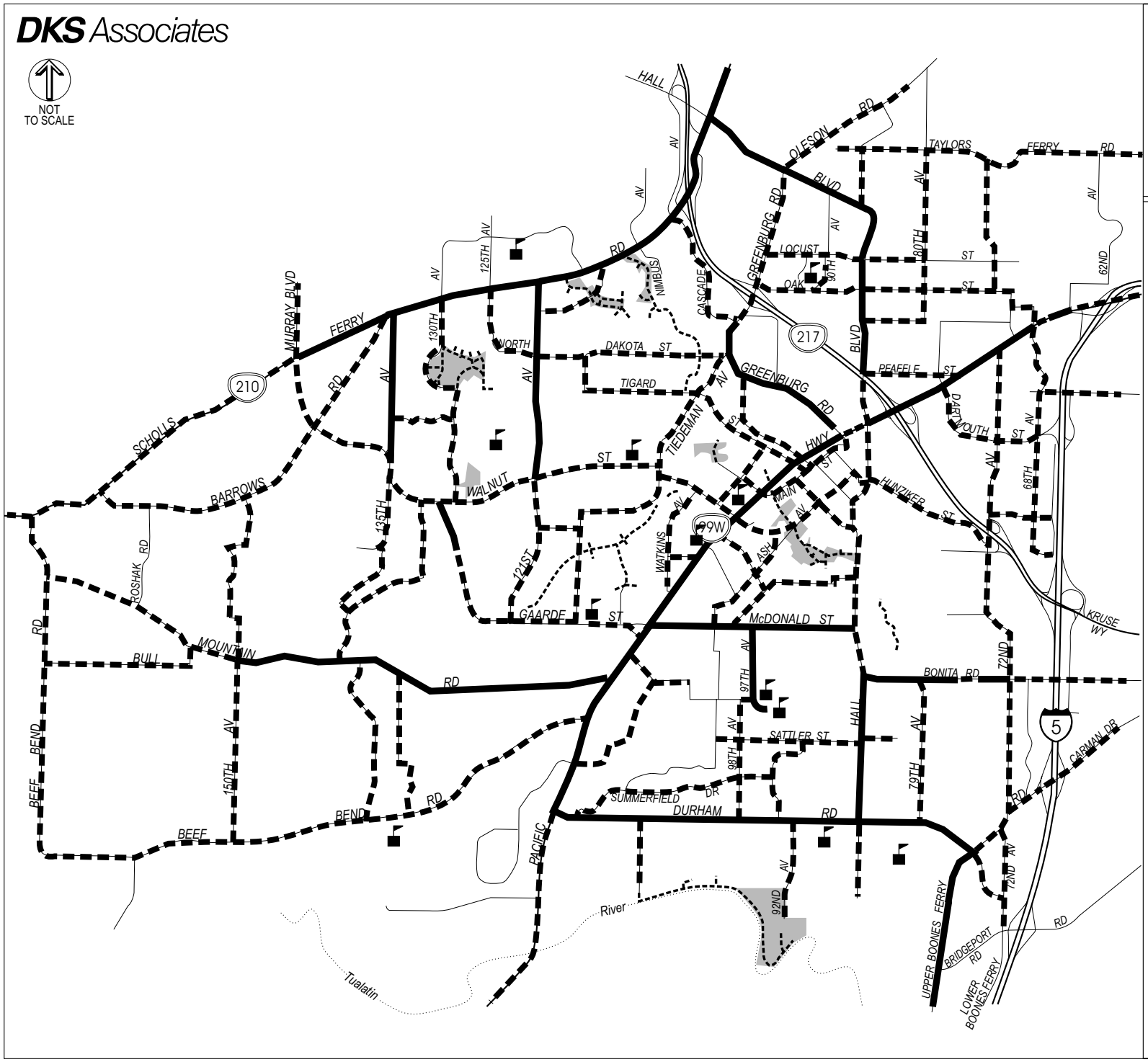
A list of likely actions to achieve fulfillment of these priorities was developed into a Bicycle Master Plan. The Bicycle Master Plan (Figure 6-2) is an overall plan and summarizes the "wish list" of bicycle-related projects in Tigard, providing a long-term map for planning bicycle facilities. From this Master Plan, a more specific, shorter term, Action Plan was developed. The Action Plan (Figure 6-3) consists of projects that the City should actively try to fund. These projects form a basic bicycle grid system for Tigard. As development occurs, streets are rebuilt and other opportunities (such as grant programs) arise, projects on the Master Plan should be pursued as well.

POTENTIAL PROJECT LIST

Table 6-4 outlines potential bicycle projects in Tigard. The City, through its Capital Improvement Program (CIP) and bond measure funding (along with joint funding with other agencies such as Washington County or Metro or development approval) would implement these projects. Figure 6-3 summarizes the Bicycle Action Plan. Multi-use paths identified on the bicycle plans should be aligned to cross roadways at intersections for safe crossing rather than crossing roadways at mid-blocks without traffic control.

There is an off-street multi-use trail shown along the powerline corridor in the western part of Tigard. This corridor is designated as a proposed *Off-Street Multi-Use Path* in Metro's Regional Bicycle System[6], however, the corridor follows a very steep grade and would be extremely difficult for most bicyclists. The corridor could be developed as a multi-use path that could be used by serious bicyclists as well as pedestrians.

[6] Regional Bicycle System Map, Version 4.0, Metro, December 1, 1997.



CITY OF TIGARD

Transportation Systems Plan

Legend

- Existing Bike Lanes
- Proposed Bike Lanes*
- Off Street Paths
- Parks
- Schools

* Note: There may be existing bike lanes on one side of street - *see Existing Bike Lanes* graphic for clarification.

Figure 6-1
BICYCLE PLAN ALTERNATIVE
(All Arterials/Collectors Option)

DKS *Associates*

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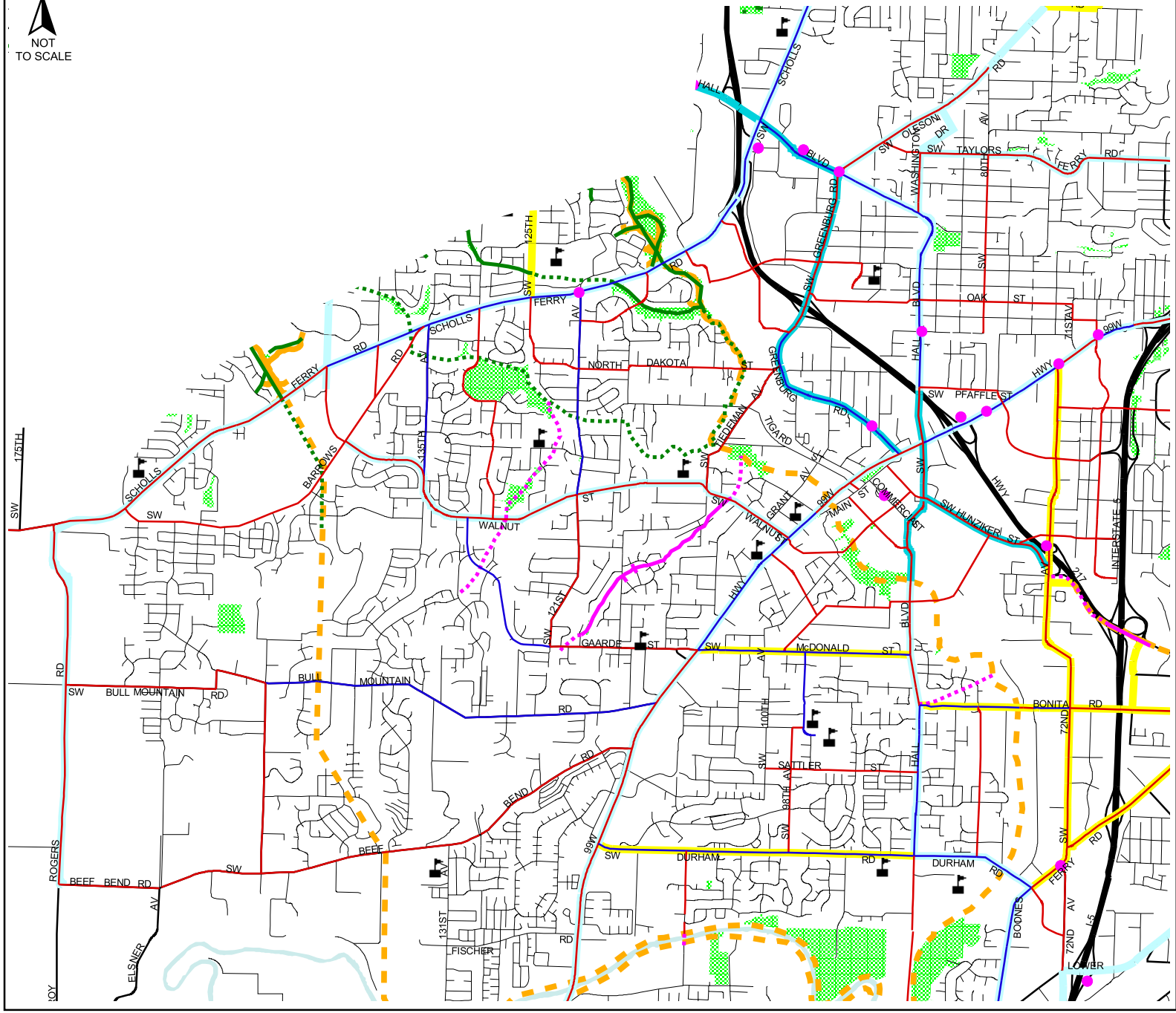


CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- RTP Major Transit Stop
- Schools

Parks
- Existing Park

Bike Lanes
- Existing
- Proposed

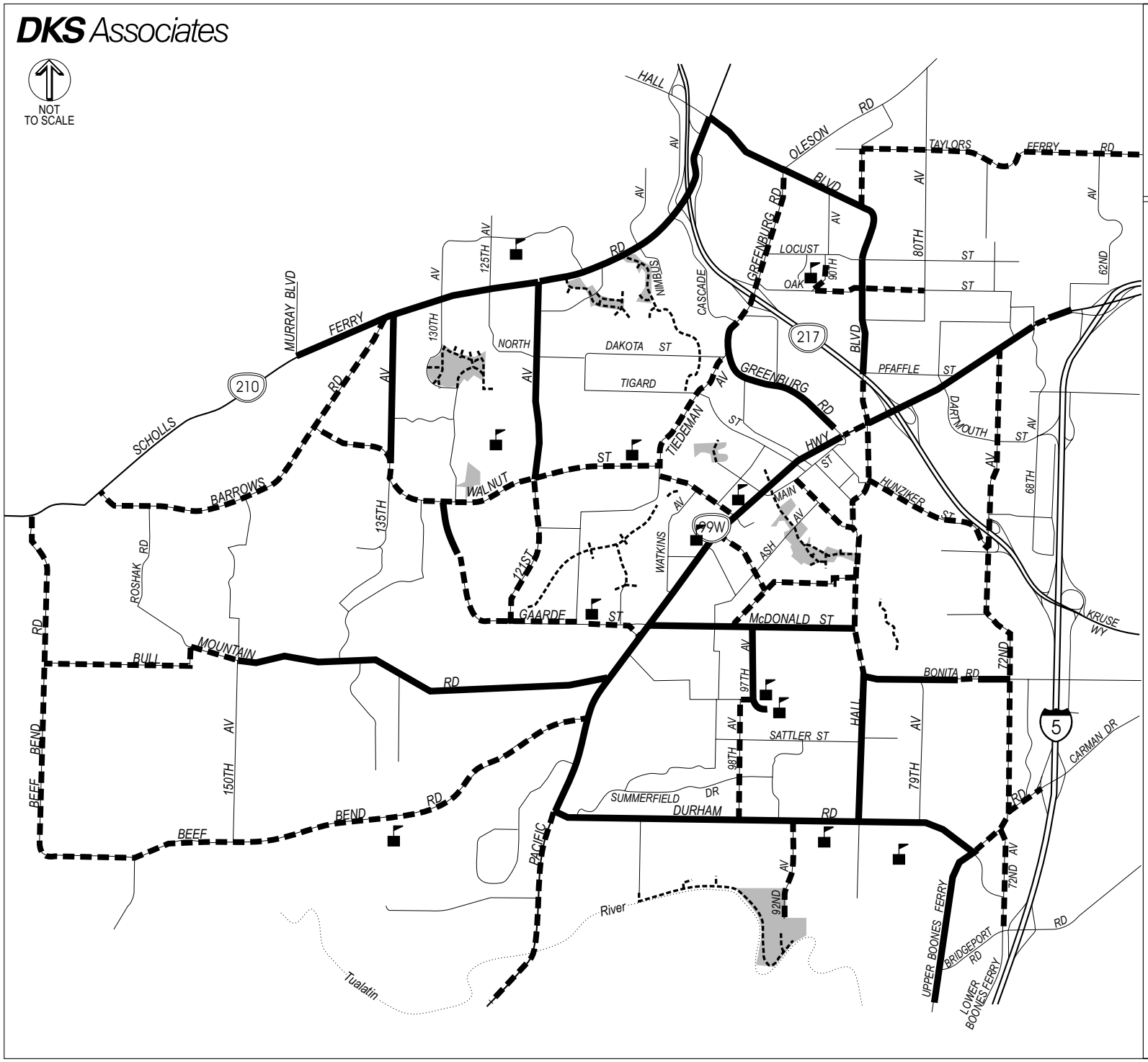
Tigard Off-Street Multi-Use Paths
- Proposed
- Existing

THRPD Trails
- Existing
- Proposed

RTP Bicycle System Designations
- Regional Access Bikeway
- Regional Corridor on-street bikeway
- Community Connector

RTP Regional Corridor Off-Street Regional Multi-Use Path
- Existing
- Proposed

Figure 6-2
BICYCLE MASTER PLAN
(Framework Option)



CITY OF TIGARD

Transportation Systems Plan

Legend

- Existing Bike Lanes
- Proposed Bike Lanes*
- Off Street Paths
- Parks
- Schools

* Note: There may be existing bike lanes on one side of street - *see Existing Bike Lanes* graphic for clarification.

Figure 6-3
BICYCLE ACTION PLAN

Table 6-4
Bicycle Project Priorities

Rank *	Project	From	To
Action Plan Projects			
H	Taylor's Ferry Road	Washington Drive	City Limits
H	Washington Drive	Hall Boulevard	Taylor's Ferry Road
H	Hall Boulevard	Pfaffle Street	Bonita Road
H	Greenburg Road	Hall Boulevard	Cascade Avenue
H	Oak Street (RTP 6019)	Hall Boulevard	80th Avenue
H	Oak Street	Hall Boulevard	90th Avenue
H	ORE 99W	East City Limits	South City Limits
H	72nd Avenue	ORE 99W	South City Limits
H	Hunziker Street	Hall Boulevard	72nd Avenue
H	Upper Boones Ferry Rd	I-5	Durham Road
H	Bonita Road	72nd Avenue	West of 72nd Avenue
H	Burnham Street	Main Street	Hall Boulevard
H	O'Mara Street	McDonald Street	Hall Boulevard
H	Frewing Street	ORE 99W	O'Mara Street
H	Murdock Street	98th Avenue	97th Avenue
H	98th Avenue	Murdock Stret	Durham Road
H	92nd Avenue	Durham Road	Cook Park
H	Tiedeman Avenue	Greenburg Road	Walnut Street
H	Walnut Street	ORE 99W	Barrows Road
H	121st Avenue	Walnut Street	Gaarde Street
H	Gaarde Street	Walnut Street	ORE 99W
H	Barrows Road	Scholls Ferry Road (West)	Scholls Ferry Road (East)
H	Scholls Ferry Road	Hall Boulevard	Barrows Road
H	Bull Mountain Road	150th Avenue	Beef Bend Road
H	Beef Bend Road	ORE 99W	Scholls Ferry Road
H			
Other Master Plan Projects			
M	80th Avenue	Taylor's Ferry Road	Spruce Street
M	Oak Street	Greenburg Road	90th Avenue
M	Oak Street	80th Avenue	71st Avenue
M	71st Avenue	Oak Street	Pine Street
M	Pine Street	71st Avenue	69th Avenue
M	69th Avenue	Pine Street	ORE 99W
M	68th Avenue	ORE 99W	South End of Street
M	Dartmouth Street	ORE 99W	68th Avenue
M	Hampton Street	72nd Avenue	68th Avenue
M	Pfaffle Street	Hall Boulevard	ORE 99W
M	Haines Street	68th Avenue	East City Limits

Rank *	Project	From	To
M	Bonita Road	72nd Avenue	East City Limits
M	Scoffins Street	Hall Boulevard	Main Street
M	Sattler Street	100th Avenue	Hall Boulevard
M	Ross Street	Hall Boulevard	East End of Street
M	Hall Boulevard	Durham Road	South City Limits
M	108th Avenue	Durham Road	South End of Street
M	150th Avenue	Bull Mountain Road	Beef Bend Road
M	130th Avenue	Scholls Ferry Road	Winterlake Drive
M	Winterlake Drive	130th Avenue	128th Avenue
M	128th Avenue	Winterlake Drive	Walnut Street
M	North Dakota Street	Scholls Ferry Road	Greenburg Road
M	Springwood Drive	Scholls Ferry Road	121st Avenue
M	Cascade Avenue	Scholls Ferry Road	Greenburg Road
M	Durham Road	Upper Boones Ferry Road	72nd Avenue
M	79th Avenue	Durham Road	Bonita Road
M	Off-Street Multi-Use Path	Powerline corridor in west Tigard	
M	Off-Street Multi-Use Path	Southside ORE 217 from Hunziker to I-5 Bridge	
M	Off-Street Multi-Use Path	Adjacent to Tualatin River	
M	Off-Street Multi-Use Path	Bridge over Tualatin River at 108th	
M	Off-Street Multi-Use Path	Adjacent to Fanno Creek	

***** H=High, M=Medium, L=Low Priority

COMPLEMENTING LAND DEVELOPMENT ACTIONS

The Transportation Planning Rule requires that bicycle parking facilities be provided as part of new residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park and ride lots.[7] The City through its Community Development Code has in place requirements for bicycle parking.

It is important that, as new development occurs, connections or accessways are provided to link the development to the existing bicycle and pedestrian facilities in as direct manner as is reasonable. If a development fronts a proposed bikeway or sidewalk (as shown in the Bicycle or Pedestrian Master Plans), the developer shall be responsible for providing the bikeway or walkway facility as part of any half-street improvement required for project mitigation.

[7] Transportation Planning Rule, State of Oregon, Department of Land Conservation and Development, Section 660-12-045(3)(a).

Chapter 7
Transit

This chapter summarizes existing and future transit needs in the City of Tigard. The following sections outline the criteria to be used to evaluate needs, provides a number of strategies for implementing a transit plan and recommends a transit plan for the City of Tigard. The needs, criteria and strategies were identified in working with the City's TSP Task Force. This committee provided input regarding the transportation system in Tigard, specifically exploring transit needs. The methodology used to develop the transit plan combined citizen and staff input.

NEEDS

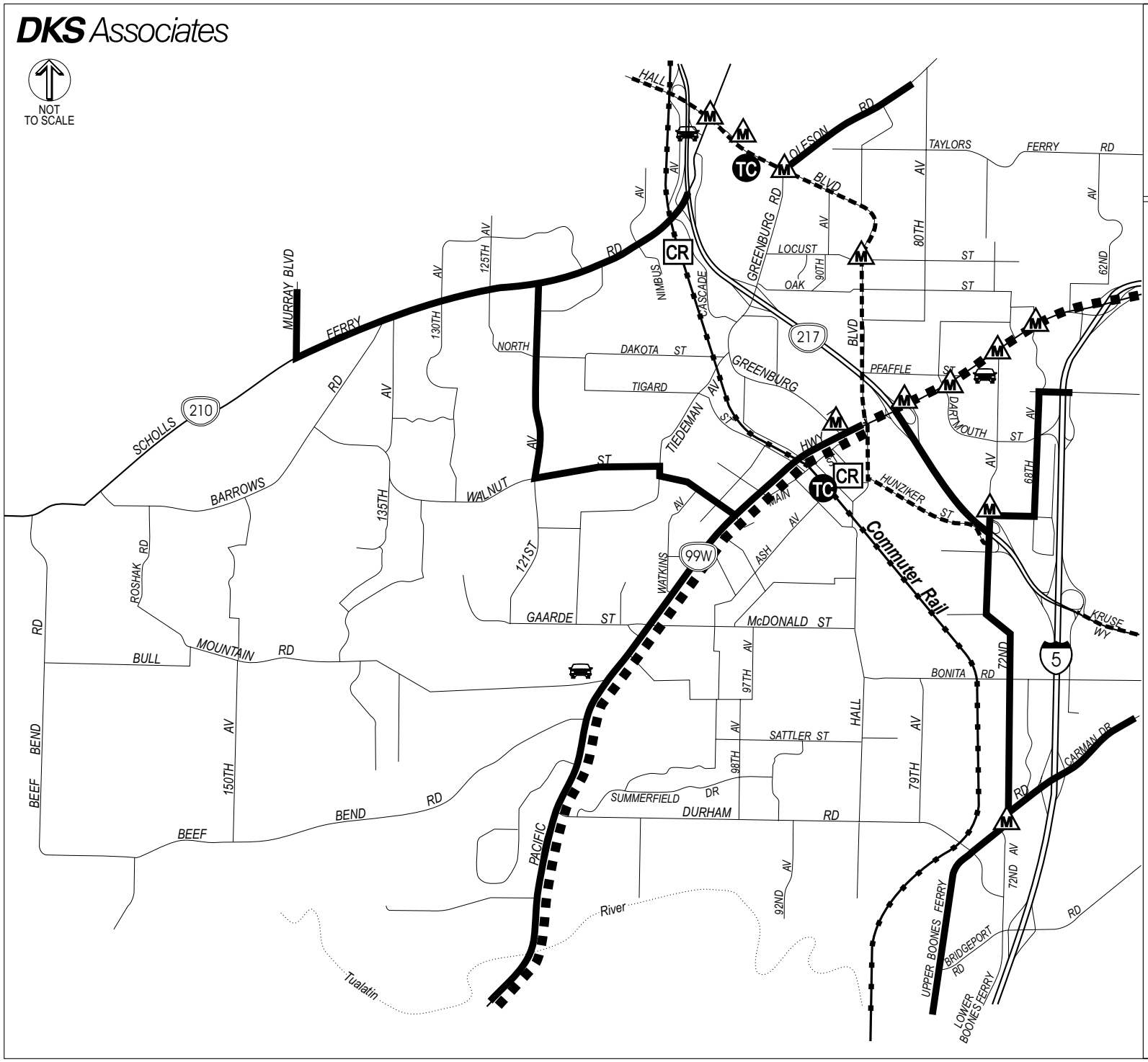
There are currently 12 fixed bus routes which provide service within the City of Tigard. These bus routes are summarized in Chapter 3 (Existing Conditions). There are four express routes providing service to Tigard residents (12E, 64X, 92X and 95X). Existing transit headways on bus routes in Tigard range from 10-15 minutes on Routes 12 and 92X to about 30 minutes on Routes 76 and 78 during peak commute periods.

Metro's Draft Regional Transportation Plan (RTP) identifies the following routes on its Public Transportation System Map (Figure 7-1)[1]:

- ORE 217 HCT Corridor
- Greenburg/Hall/Durham HCT Corridor
- ORE 99W (East of ORE 217) HCT Corridor
- Hall Boulevard (North of ORE 217) Frequent Bus
- Hunziker Street Frequent Bus
- ORE 99W (West of ORE 217) Primary Bus
- Scholls Ferry Road (East of Murray) Primary Bus
- 121st/Walnut Street Primary Bus
- 68th Parkway/Hampton Street Primary Bus
- 72nd Avenue (South of Hampton) Primary Bus

Based upon these designations, the City of Tigard designates all bus stops on HCT Corridors and Frequent Bus routes as Major Transit Stops. In addition, all park and ride sites and transit stations are designated major transit stops (Downtown Tigard, Washington Square, park and ride at ORE 99W/72nd Avenue). While Tri-Met bus ridership in Tigard increased by 35% from 1990 to 1994 and another 15% from 1994 to 1999 (comparing 12 routes), transit ridership represents 6 percent of Tigard PM peak hour trip making.

[1] *Public Transportation System Map*, Metro, Version 4.0, December 1, 1997.



CITY OF TIGARD

Transportation Systems Plan

Legend

- High Capacity Transit (HCT)
- Frequent Bus
- Regional Bus
- TC - Transit Center Location
- CR - Potential Commuter Railstation
- Park & Ride Lot Location
- M - Major Transit Stop

Figure 7-1
RTP PUBLIC TRANSPORTATION SYSTEM CLASSIFICATION

Existing Tri-Met service covers nearly all of the routes established in the Metro Public Transportation Plan today. Primary routes provide the backbone of the transit system and are intended to provide high quality service operating at frequencies of 15 minutes all day. The HCT service on Hall that diverges to Durham should be considered to stay on Hall to the south when Hall is extended in the future.

All of Tri-Met's bus routes are accessible and most are equipped with lifts. Every Tri-Met bus has priority seating near the front for seniors and passengers with disabilities. Tri-Met also operates a LIFT program for those who are unable to use Tri-Met buses or MAX because of a disability. One of Tigard's greatest transit needs in the future will be improving transit service to the southwest portion of the City where much of the new development is occurring. Tri-Met has identified Durham Road and Barrows Road for transit service in the future. Rapidly increasing employment and housing creates a much greater opportunity to create productive public transit routing in Tigard.

CRITERIA

Tigard's TSP Task Force created a set of goals and policies to guide transportation system development in Tigard. These goals and policies represent the criteria that all transit improvements in Tigard should be compared against to determine if they conform to the intended vision of the City. A few of these policies pertain specifically to transit needs:

Goal 2

Policy 2 *The City shall coordinate with Tri-Met, and/or any other transit providers serving Tigard, to improve transit service to Tigard. Fixed route transit will primarily use arterial and collector streets in Tigard. Development adjacent to transit routes will provide direct pedestrian accessibility.*

Policy 7 *Tigard will participate in vehicle trip reduction strategies developed regionally targeted to achieve non-single occupant vehicle levels outlined in Table 1.3 of the Regional Transportation Plan.*

Policy 8 *Tigard will support the development of a commuter rail system as part of the regional transit network.*

Goal 5

Policy 1 *Design and construct transportation facilities to meet the requirements of the Americans with Disabilities Act.*

STRATEGIES

Tri-Met is responsible for any changes in routes through their annual transit service plan process. In order for the City to have its transit needs assessed, the City can provide input to Tri-Met through this process.

Several strategies were developed for the implementation of future transit facilities in Tigard. These strategies were developed to provide the City with priorities in providing guidance to Tri-Met since it is likely that the available funding will be insufficient to address all of the projects identified in the Transit Master Plan.

Strategy 1 - "Provide Commuter Rail"

This strategy focuses on providing Commuter Rail through Tigard. This allows greater connectivity to the regional transit network and to other nearby Cities such as Hillsboro, Tualatin and Wilsonville. Stations in the Tigard area would be located in the Downtown Area and near Washington Square. Beyond the current Beaverton/Wilsonville proposal, the significant traffic operational problems in the ORE 99W corridor make extended commuter rail service to Sherwood, Newberg, McMinnville, Spirit Mountain and the coast requires further study.

Strategy 2 (Tie) - "Provide Service Often (i.e. every 15 minutes) in Peak Commute Periods"

This strategy focuses on decreasing the headways between buses during peak morning and evening commute periods. This increases operating costs for Tri-Met and without increased ridership (or potential for more ridership), Tri-Met would not upgrade services. In the 1999 service plan, Tri-Met focused on more frequent service.

Strategy 2 (Tie) - "Provide Express Routes to Regional Employment Centers (i.e. Downtown Portland, Washington Square)"

This strategy is aimed at providing service directly from Tigard to regional employment centers. This might include a few stops in Tigard followed by express service to downtown Portland (one or two stops at park & ride lots along the way) or Beaverton Transit Center, etc.

Strategy 2 (Tie) – "Provide Bus Shelters/Improved User Amenities"

This strategy focuses on installation of bus shelters and other user amenities along bus routes in Tigard. The need for bus shelters at bus stops, as well as other user amenities, should be evaluated in conjunction with any new commercial or residential development adjacent to a transit street. One user amenity that got a favorable reaction from the Task Force was "real time" bus schedule information at bus stops, indicating how long it would be before the next bus arrives at a particular stop. Tri-Met's *Planning and Design for Transit Handbook* should be used as a guide in providing transit amenities. Generally, when a transit stop has 75 or more daily boardings, transit amenities should be pursued.

Strategy 5 (Tie) - "Provide Access to Employment Areas"

This strategy focuses on providing access to locations where people work in Tigard. Employment areas in and near Tigard might include Washington Square, Tigard Triangle, ORE 99W and Sequoia Parkway/72nd Avenue.

Strategy 5 (Tie) – "Provide More Local Transit Service"

This strategy focuses on providing more transit service on local routes (typically near where people live), rather than primarily on arterials and collectors. An assessment of existing transit route coverage in Tigard was done comparing current and future placement of transit services in relationship to land use densities that would be supportive of transit use. The land use data from the travel demand forecast model was

utilized in this assessment. A one quarter mile "buffer" was established around each transit stop and compared to the adjacent land use. The existing conditions indicate that about 80 percent of the land area in Tigard with density supportive of transit use would be within one-quarter mile of a transit stop (Figure 7-2). With the proposed future transit service coverage, approximately 85 percent of the land area in Tigard with land use densities supportive of transit service would be within one-quarter mile of a transit stop (Figure 7-3). This does not specifically address the frequency of some of the transit services or the destinations (which would require coordination with Tri-Met for this strategy to be effectively implemented).

Strategy 7 – "Provide Access to Commercial Areas"

This strategy focuses on providing access to locations where people choose to do their shopping. Commercial areas in Tigard might include Washington Square, the Tigard Triangle, ORE 99W, Main Street, and the area adjacent to Sequoia Parkway.

Strategy 8 - "Provide Park & Ride Lots"

This strategy provides park & ride lots at locations where concentrated transit demand exists or where it is desirable for Tri-Met to stop.

Strategy 9 - "Provide Access to Activity & Service Centers"

This strategy focuses on providing transit access to destinations such as community centers, hospitals, schools, churches, etc.

Table 7-1 summarizes the strategies in terms of meeting the transportation goals and policies of Tigard. The strategies are listed in the priority order as determined by the TSP Task Force.

DKS *Associates*

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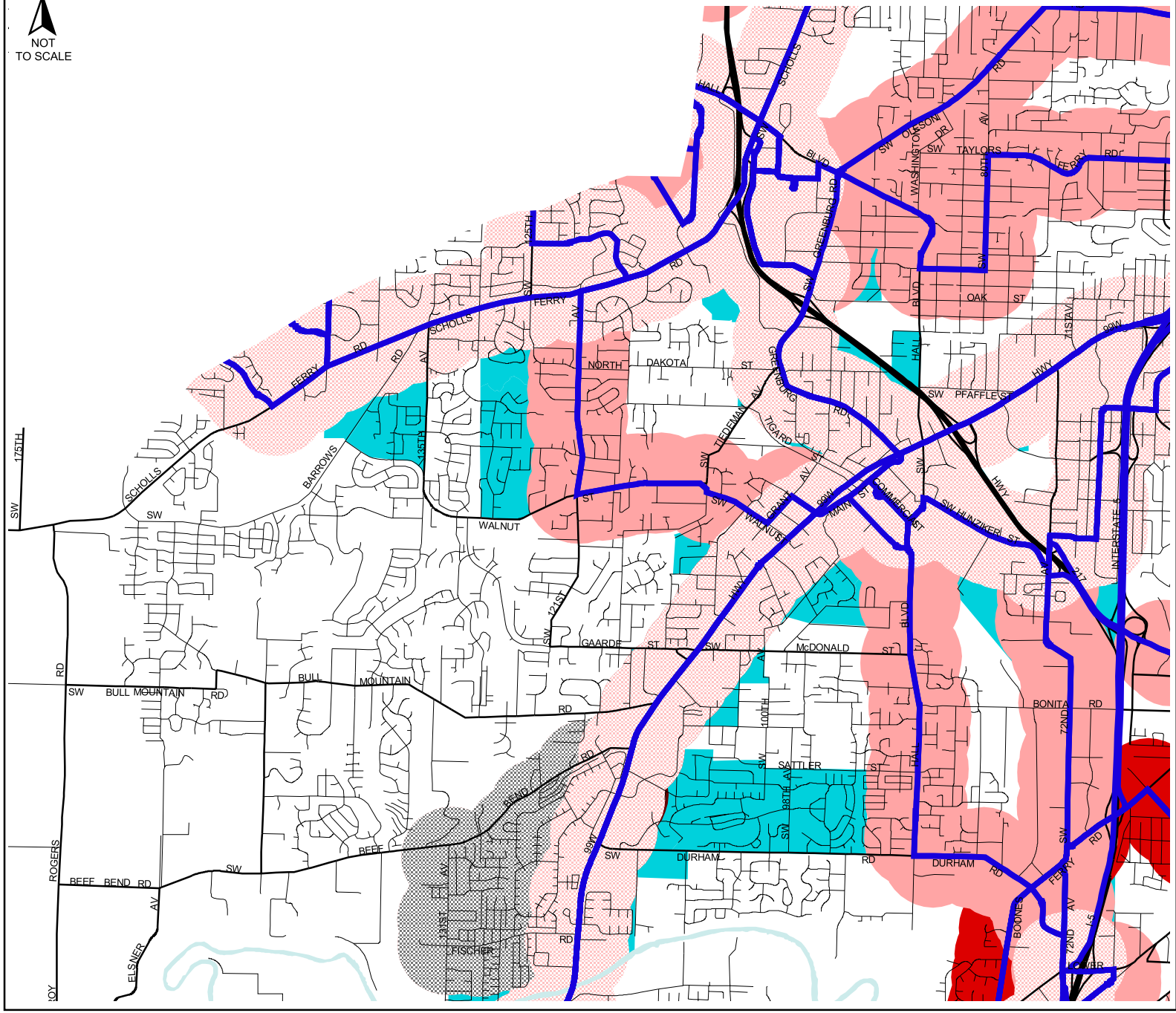

CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Existing Transit/Service Route
- Shuttle Area
- Existing LOS A-C Transit Buffer
- Existing LOS D Transit Buffer
- Existing LOS E Transit Buffer
- Existing LOS F Transit Buffer
- 1994 Transit Supportive Zones Not Covered by Buffer

Note: Transit LOS is based on headway in the PM Peak Period, as defined in the 2000 Highway Capacity Manual.

LOS A: 1-9 minutes
LOS B: 10-14 minutes
LOS C: 15-20 minutes
LOS D: 21-30 minutes
LOS E: 31-60 minutes
LOS F: Greater than 60 minutes

Figure 7-2
Existing Transit Coverage

DKS *Associates*

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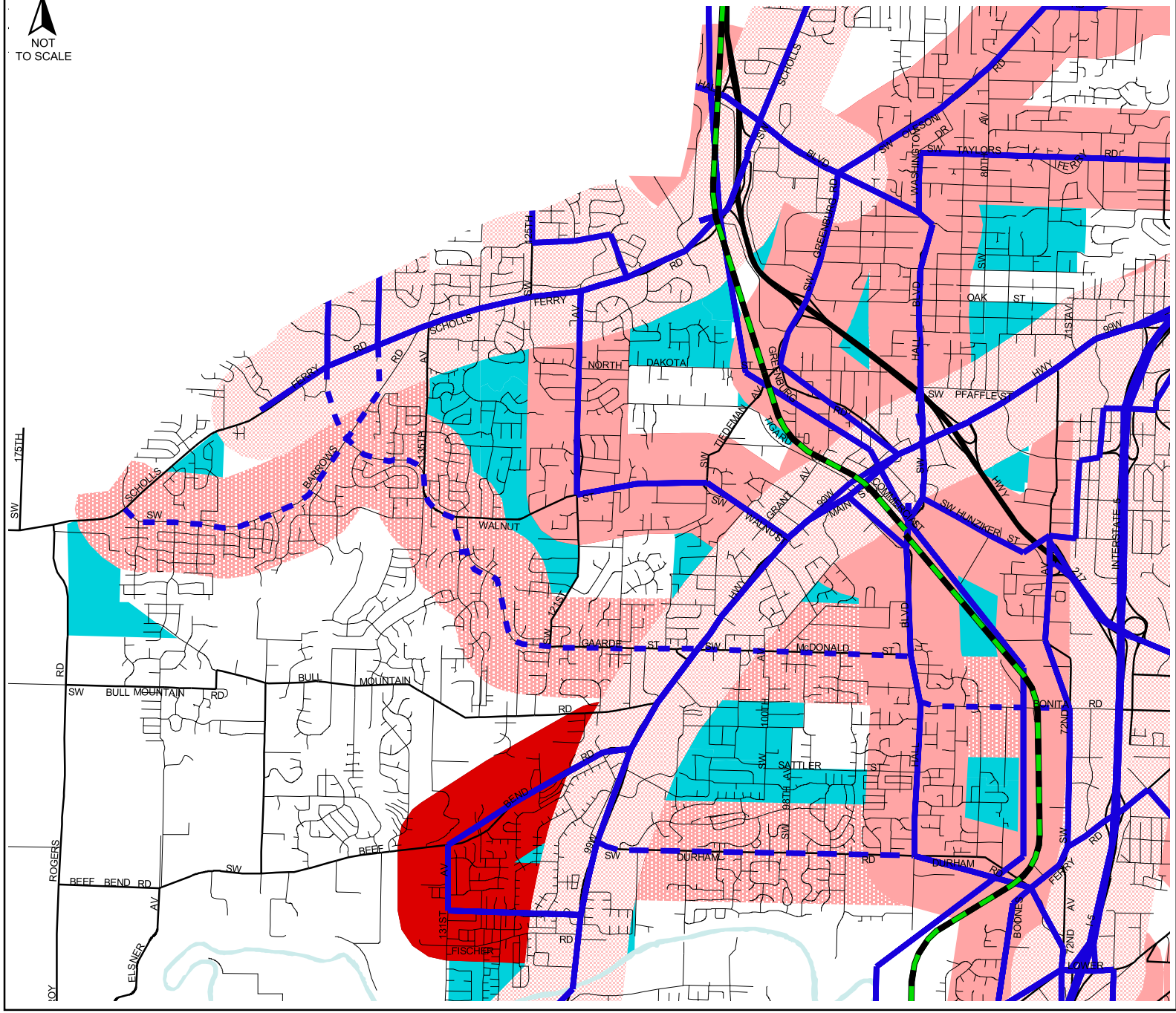

CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Proposed Commuter Rail
- 2020 Committed Model Transit/Service Routes
- Planned Future Transit/Service Route
- Potential Future Transit/Service Route
- 2020 Comitted LOS A-C Transit Buffer
- 2020 Committed LOS D Transit Buffer
- 2020 Committed LOS E Transit Buffer
- 2020 Committed LOS F Transit Buffer
- Potential Future Transit Route LOS D Buffer
- Planned Future Transit Route LOS D Buffer
- 2015 Transit Supportive Zones Not Covered By Buffer

Note: Transit LOS is based on headway in the PM Peak Period, as defined in the 2000 Highway Capacity Manual.

LOS A: 1-9 minutes
LOS B: 10-14 minutes
LOS C: 15-20 minutes
LOS D: 21-30 minutes
LOS E: 31-60 minutes
LOS F: Greater than 60 minutes

Figure 7-3
Future Transit Coverage

Table 7-1
Transit Strategies Comparisons

Strategy	Policies			
	2-2	2-7	2-8	5-1
1. Provide Commuter Rail	◖	◖	●	◖
2. Provide Service Often in Peak Commute Periods	◖	◖	◖	◖
3. Provide Express Routes to Regional Employment Centers	◖	◖	◖	◖
4. Provide Bus Shelters/User Amenities	◖	◖	❍	◖
5. Provide Access to Employment Areas	◖	◖	◖	◖
6. Provide More Local Transit Service	◖	◖	❍	◖
7. Provide Access to Commercial Areas	◖	❍	◖	◖
8. Provide Park & Ride Lots	◖	◖	❍	◖
9. Provide Access to Activity & Service Centers	◖	◖	◖	◖

✖ Does not meet criteria
❍ Partially meets criteria
◖ Mostly meets criteria
● Fully meets criteria

RECOMMENDED TRANSIT PLAN

The strategies that had been developed by the TSP Task Force were then ranked by the committee. Each committee member was assigned a certain number of points that he or she could allocate to each of the strategies according to his or her priorities. The ranking of these strategies is the same as listed previously.

Potential Project List

Proposed transit routes/facilities are summarized in Table 7-2 and Figure 7-4. Transit projects were determined based on strategies listed above and project feasibility. Park and ride lots, pedestrian districts and potentially new service areas are shown on Figure 7-4.

Table 7-2
Potential Transit Projects

Rank	Project	Description
1	Provide Commuter Rail Station in Tigard	As part of the Beaverton to Wilsonville Commuter Rail system provide a park and ride station in downtown Tigard. Support regional study of western extensions of commuter rail service (or comparable options).
2	Provide Transit Amenities at Major Transit Stops	Provide shelters, information kiosks, etc key transit routes in Tigard with land use development. Focus on development of "SMART" bus stops.
3	Improve Pedestrian Connections to Transit Facilities	Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities (i.e. park-and-ride lots, bus stops, etc.). Within ¼ mile of bus stops, focus on enhancing pedestrian access. Enhance Regional Center and Town Center pedestrian access to transit.
4	Decrease Headways	Provide more frequent transit service during peak commute periods.
5	Establish Additional Transit Routes	Provide service along Durham Road and in the western part of the City (i.e. Durham Road, Barrows Road, Murray/Walnut/Gaarde) . Time additional transit service to coordinate with major road extensions or street improvements.
6	Add a new Transit Center at the Murray/Scholls Town Center	Provide a new transit center with the development of the Murray/Scholls Town Center. The Downtown Town Center and Washington Square Regional Center are the existing Transit Center locations.

DKS *Associates*

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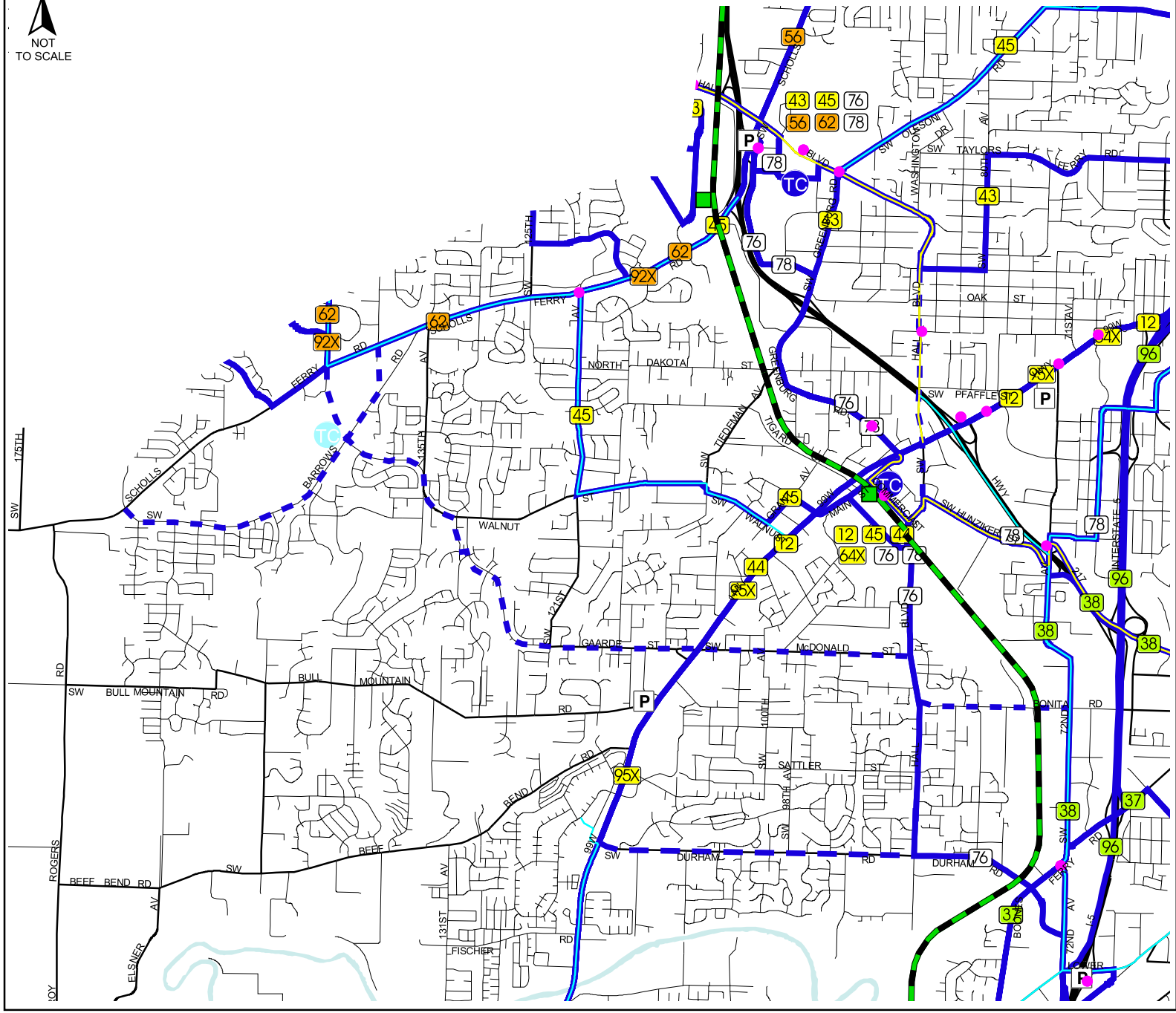


CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Proposed Commuter Rail Stations
- Proposed Commuter Rail
- Future Transit Center Opportunity
- Transit Center Location
- Park and Ride Location
- Existing Transit/Service Route
- Planned Future Transit/Service Route
- Potential Future Transit/Service Route
- RTP Major Transit Stop

Proposed RTP Transit Route Designations

- Regional Bus
- Frequent Bus
- Rapid Bus

Figure 7-4
Future Transit Service

Recommended Land Use Actions

The City of Tigard Development Code includes requirements for land use changes to address transit access. Section 18.360.090 provides approval criteria related to public transit.

a. Provisions within the plan shall be included for providing for transit if the development proposal is adjacent to existing or proposed transit route;

b. The requirements for transit facilities shall be based on:
   (1) The location of other transit facilities in the area; and
   (2) The size and type of the proposal.

c. The following facilities may be required after City and Tri-Met review:
   (1) Bus stop shelters;
   (2) Turnouts for buses; and
   (3) Connecting paths to the shelters.

The only modification to this code provision is to define adjacent as having a bus stop within 500 feet of the property.

Chapter 8
Motor Vehicles

This chapter summarizes needs for the motor vehicle system for both existing and future conditions in the City of Tigard. This chapter also outlines the criteria to be used in evaluating needs, provides a number of strategies and recommends plans for motor vehicles (automobiles, trucks, buses and other vehicles). The needs, criteria and strategies were identified in working with the City's Task Force (which consisted primarily of the Tigard Planning Commission). This group explored automobile and truck needs in the City of Tigard and provided input about how they would like to see the transportation system in their city develop. The Motor Vehicle modal plan is intended to be consistent with other jurisdictional plans including Metro's *Draft Regional Transportation Plan (RTP)*, Washington County's Transportation Plan and ODOT's *Oregon Highway Plan* (OHP).

The motor vehicle element of the TSP involves several elements as shown in Figure 8-1. This chapter is separated into the following ten sections:

- Criteria
- Functional Classification (including summary of cross sections and local street connectivity)
- Circulation and Capacity Needs
- Safety
- Access Management
- Maintenance
- Neighborhood Traffic Management
- Parking
- Transportation System Management/Intelligent Transportation Systems
- Truck Routes

CRITERIA

Tigard's TSP Task Force created a set of goals and policies to guide transportation system development in Tigard (see Chapter 2). Many of these goals and policies pertain specifically to motor vehicles. These goals and policies represent the criteria that all motor vehicle improvements or changes in Tigard should be measured against to determine if they conform to the intended direction of the City.

Goal 1 Livability

Policy 1 Maintain the livability of Tigard through proper location and design of transportation facilities.

Policy 3 Address issues of excessive speeding and through traffic on local residential streets through a neighborhood traffic program. The program should address corrective measures for existing problems and assure that development incorporates traffic calming.

CITY OF TIGARD
Transportation System Plan

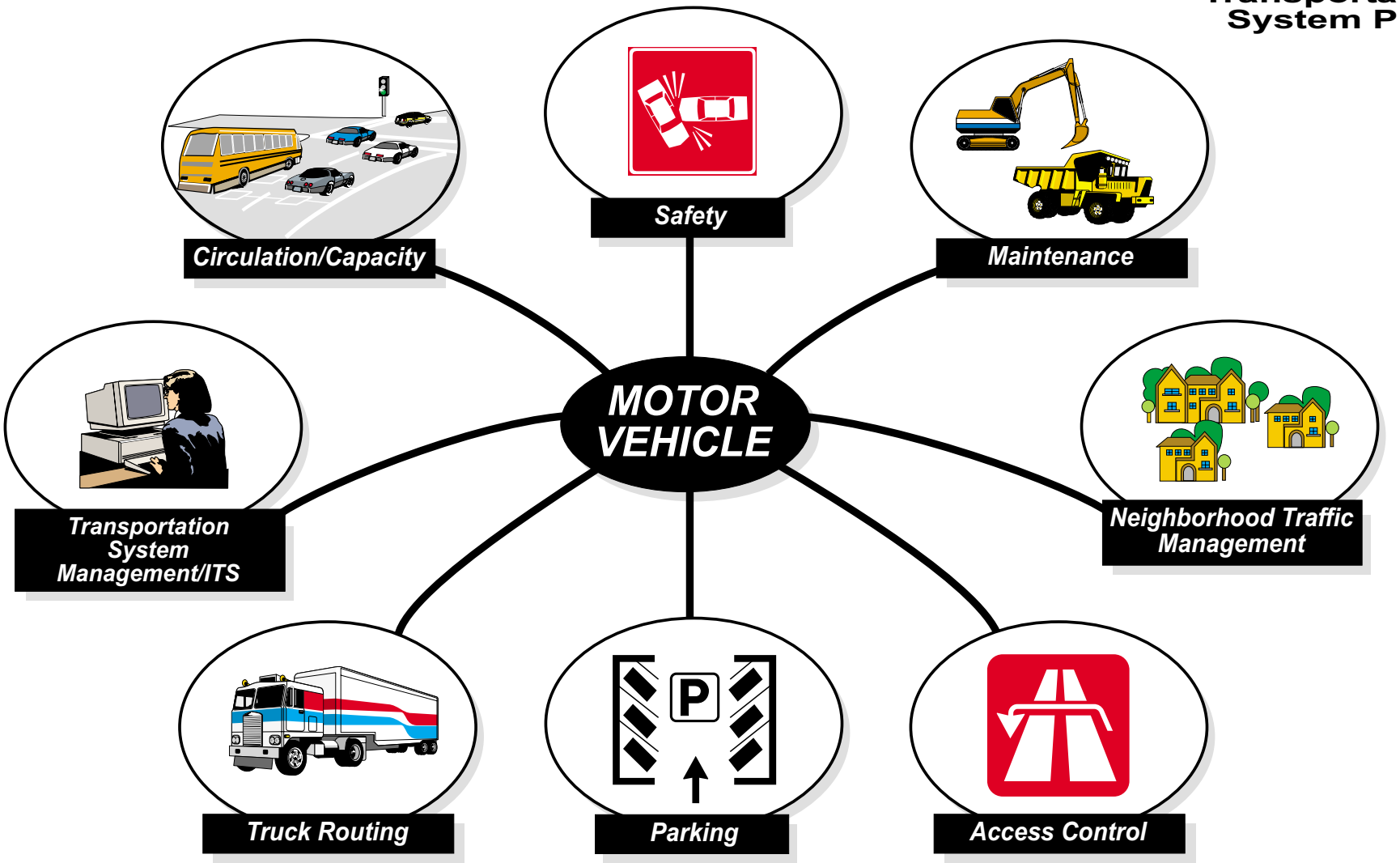


Figure 8-1
VEHICULAR ELEMENTS OF THE STREET PLAN

Goal 2 Balanced Transportation System

Policy 1 Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use.

Policy 6 Local streets shall be designed to encourage a reduction in trip length by providing connectivity and limiting out-of-direction travel. Provide connectivity to activity centers and destinations with a priority for bicycle and pedestrian connections

Policy 7 Tigard will participate in vehicle trip reduction strategies developed regionally targeted to achieve non-single occupant vehicle levels outlined in Table 1.3 of the Regional Transportation Plan.

Goal 3 Safety

Policy 1 Design of streets should relate to their intended use.

Policy 2 Street maintenance shall be a priority to improve safety in Tigard.

Policy 5 Access management standards for arterial and collector streets shall be developed to improve safety in Tigard.

Policy 6 Establish a City monitoring system that regularly evaluates, prioritizes and mitigates high accident locations within the City.

Goal 4 Performance Measures

Policy 1 A minimum intersection level of service standard shall be set for the City of Tigard. All public facilities shall be designed to meet this standard.

Policy 3 Work with Washington County, Metro, and ODOT to develop, operate and maintain intelligent transportation systems including coordination of traffic signals.

Goal 5 Accessibility

Policy 2 Develop neighborhood and local connections to provide adequate circulation in and out of the neighborhoods.

Policy 3 Work to develop an efficient arterial grid system that provides access within the City and serves through City traffic.

Goal 6 Goods Movement

Policy 1 Design arterial routes, highway access and adjacent land uses in ways that facilitate the efficient movement of goods and services.

FUNCTIONAL CLASSIFICATION

Roadways have two functions, to provide mobility and to provide access. From a design perspective, these functions can be incompatible since high or continuous speeds are desirable for mobility, while low speeds are more desirable for land access. Arterials emphasize a high level of mobility for through movement; local facilities emphasize the land access function; and collectors offer a balance of both functions (Figure 8-2).

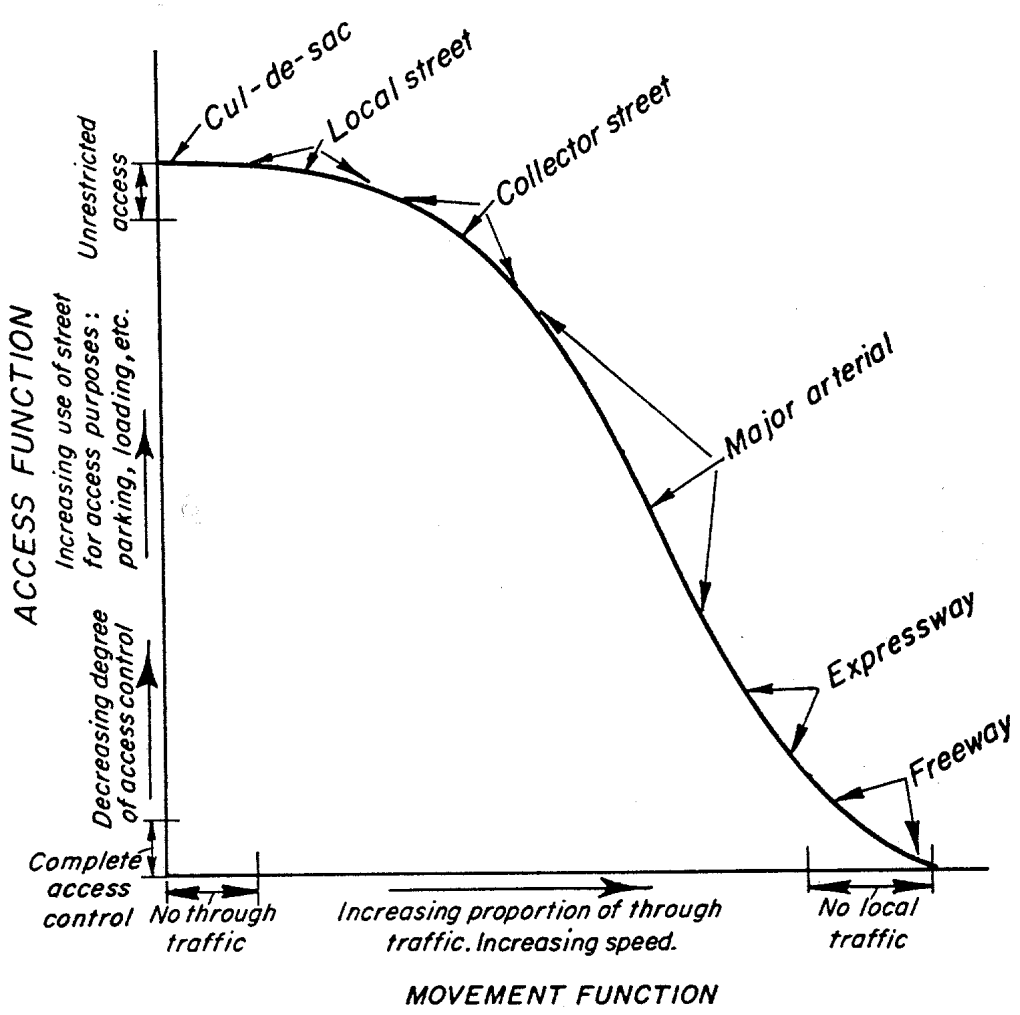
Functional classification has commonly been mistaken as a determinate for traffic volume, road size, urban design, land use and various other features which collectively are the elements of a roadway, but do not represent function. For example, the volume of traffic on a roadway is directly related to land uses and because a roadway carries a lot or a little traffic does not necessarily determine its function. The traffic volume, design (including access standards) and size of the roadway are outcomes of function, but do not define function.

Function can be best defined by connectivity. Without connectivity, neither mobility nor access can be served. Roadways that provide the greatest reach of connectivity are the highest level facilities. **Arterials** can be defined by regional level connectivity. These routes go beyond the city limits in providing connectivity and can be defined into two groups: principal arterials (typically state routes) and arterials. The efficient movement of persons, goods and services depends on an interconnected arterial system.

Collectors can be defined by citywide or district wide connectivity. These routes span large areas of the city but typically do not extend significantly into adjacent jurisdictions. They are important to city circulation. The past textbooks on functional classification generally defined all other routes as **local streets**, providing the highest level of access to adjoining land uses. These routes do not provide through connection at any significant regional, city-wide or district level.

Based upon connectivity there is a fourth level of functional classification - **neighborhood route**. In many past plans, agencies defined a minor collector or a neighborhood collector; however, use of the term collector is not appropriate. Collectors provide citywide or large district connectivity and circulation. There is a function between a collector and a local street that is unique due to its level of connectivity. Local streets can be cul-de-sacs or short streets that do not connect to anything.[1] Other routes people use to get in and around their neighborhood. They have connections within the neighborhood and between neighborhoods. These routes have neighborhood connectivity, but do not serve as citywide streets. They have been the most sensitive routes to through, speeding traffic due to their residential frontages. Because they do provide some level of connectivity, they can commonly be used as cut-through routes in lieu of congested or less direct arterial or collector streets that are not performing adequately. Cut-through traffic has the highest propensity to speed, creating negative impacts on these neighborhood routes. By designating these routes, a more systematic citywide program of neighborhood traffic management can be undertaken to protect these sensitive routes.

[1] Or in the case of neo-traditional grid systems, extensive redundancy in facilities results in local status to streets that have greater than local connectivity.



Source: University of California,
'Fundamentals of Traffic Engineering'
Wolfgang S. Homburger and
James H. Kell

Figure 8-2
STREET FUNCTION RELATIONSHIP

In the past, traffic volume and the size of a roadway have been directly linked to functional classification. More recently, urban design and land use designations have also been tied to functional classification. Discussions of neo-traditional street grids that eliminate the need for functional classification creates another commentary on this issue. All of these approaches to functional classification tend to be confusing and ever changing, complicating an essential transportation planning exercise. The planning effort to identify connectivity of routes in Tigard is essential to preserve and protect future mobility and access, by all modes of travel. In Tigard, it is not possible to have a citywide neo-traditional layout. Past land use decisions, topography and environmental features preclude this[2]. Without defining the varying levels of connectivity now in the TSP, the future impact of the adopted Comprehensive Plan land uses will result in a degraded ability to move goods and people (existing and future) in Tigard. The outcome would be intolerable delays and much greater costs to address solutions later rather than sooner.

By planning an effective functional classification of Tigard streets[3], the City can manage public facilities pragmatically and cost effectively. These classifications do not mean that because a route is an arterial it is large and has lots of traffic. Nor do the definitions dictate that a local street should only be small with little traffic. Identification of connectivity does not dictate land use or demand for facilities. The demand for streets is directly related to the land use. The highest level connected streets have the greatest potential for higher traffic volumes, but do not necessarily have to have high volumes as an outcome, depending upon land uses in the area. Typically, a significant reason for high traffic volumes on surface streets at any point can be related to the level of land use intensity within a mile or two. Many arterials with the highest level of connectivity have only 35 to 65 percent “through traffic”. Without the connectivity provided by arterials and collectors, the impact of traffic intruding into neighborhoods and local streets goes up substantially.

If land use is a primary determinate of traffic volumes on streets, then how is it established? In Oregon, land use planning laws require the designation of land uses in the Comprehensive Plan. Tigard’s Comprehensive Plan land uses have been designated for over two decades. These land use designations are very important not only to the City for planning purposes, but to the people that own land in Tigard. The adopted land uses in Tigard have been used in this study, working with the Metro regional forecasts for growth in the region for the next 20 years. A regional effort, coordinated by Metro and local agencies, has been undertaken to allocate the determined overall land use in the most beneficial manner for transportation. Without this allocation, greater transportation impacts would occur (wider and more roads than identified in this plan). As discussed in Chapter 10, if the outcome of this TSP is either too many streets or solutions that are viewed to be too expensive, it is possible to reconsider the core assumptions regarding Tigard’s livability - its adopted land uses or its service standards related to congestion. The charge of this TSP (as mandated by State law) is to develop a set of multi-modal transportation improvements to support the Comprehensive Plan land uses. Key to this planning task is the functional classification of streets.

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[2] While subdivisions or areas of neo-traditional development exist and are possible (even desirable), on the whole, the concept cannot be generically applied citywide in lieu of functional classification.

[3] Including definition of which routes connect through Tigard, within Tigard and which routes serve neighborhoods and the local level in the city.

Functional Classification Definitions

The proposed functional classification of streets in Tigard is represented by Figure 8-3. Any street not designated as either an arterial, collector or neighborhood route is considered a local street.

Principal Arterials are typically freeways and state highways that provide the highest level of regional connectivity. These routes connect over the longest distance (many miles long) and are less frequent than other arterials or collectors. These highways generally span several jurisdictions and many times have statewide importance (as defined in the ODOT Level of Importance categorization).[4] In Tigard, I-5 is designated an Interstate Highway and two routes (ORE 217 and ORE 99W) are designated Statewide Highways. All three of these routes are part of the National Highway System. While State Highways make up only 10 percent of Oregon's road mileage, they handle over 60 percent of the daily traffic[5].

Arterial streets serve to interconnect and support the principal arterial highway system. These streets link major commercial, residential, industrial and institutional areas. Arterial streets are typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets for through traffic in lieu of a well placed arterial street. Access control is the key feature of an arterial route. Arterials are typically multiple miles in length. Many of these routes connect to cities surrounding Tigard and commonly provide access to freeways via interchanges.

Collector streets provide both access and circulation within and between residential and commercial/industrial areas. Collectors differ from arterials in that they provide more of a citywide circulation function, do not require as extensive control of access (compared to arterials) and penetrate residential neighborhoods, distributing trips from the neighborhood and local street system. Collectors are greater than 0.5 to 1.0 miles in length.

Neighborhood routes are usually long relative to local streets and provide connectivity to collectors or arterials. Because neighborhood routes have greater connectivity, they generally have more traffic than local streets and are used by residents in the area to get into and out of the neighborhood, but do not serve citywide/large area circulation. They are typically about a quarter to a half mile in total length. Traffic from cul-de-sacs and other local streets may drain onto neighborhood routes to gain access to collectors or arterials. Because traffic needs are greater than a local street, certain measures should be considered to retain the neighborhood character and livability of these routes. Neighborhood traffic management measures are often appropriate (including devices such as speed humps, traffic circles and other devices - refer to later section in this chapter). However, it should **not** be construed that neighborhood routes automatically get speed humps or any other measures. While these routes have special needs, neighborhood traffic management is only one means of retaining neighborhood character and vitality.

Local Streets have the sole function of providing access to immediate adjacent land. Service to "through traffic movement" on local streets is deliberately discouraged by design.

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[4] 1999 Oregon Highway Plan, ODOT, March 1999.

[5] 1999 Oregon Highway Plan, ODOT, March 1999, page 13.

DKS *Associates*

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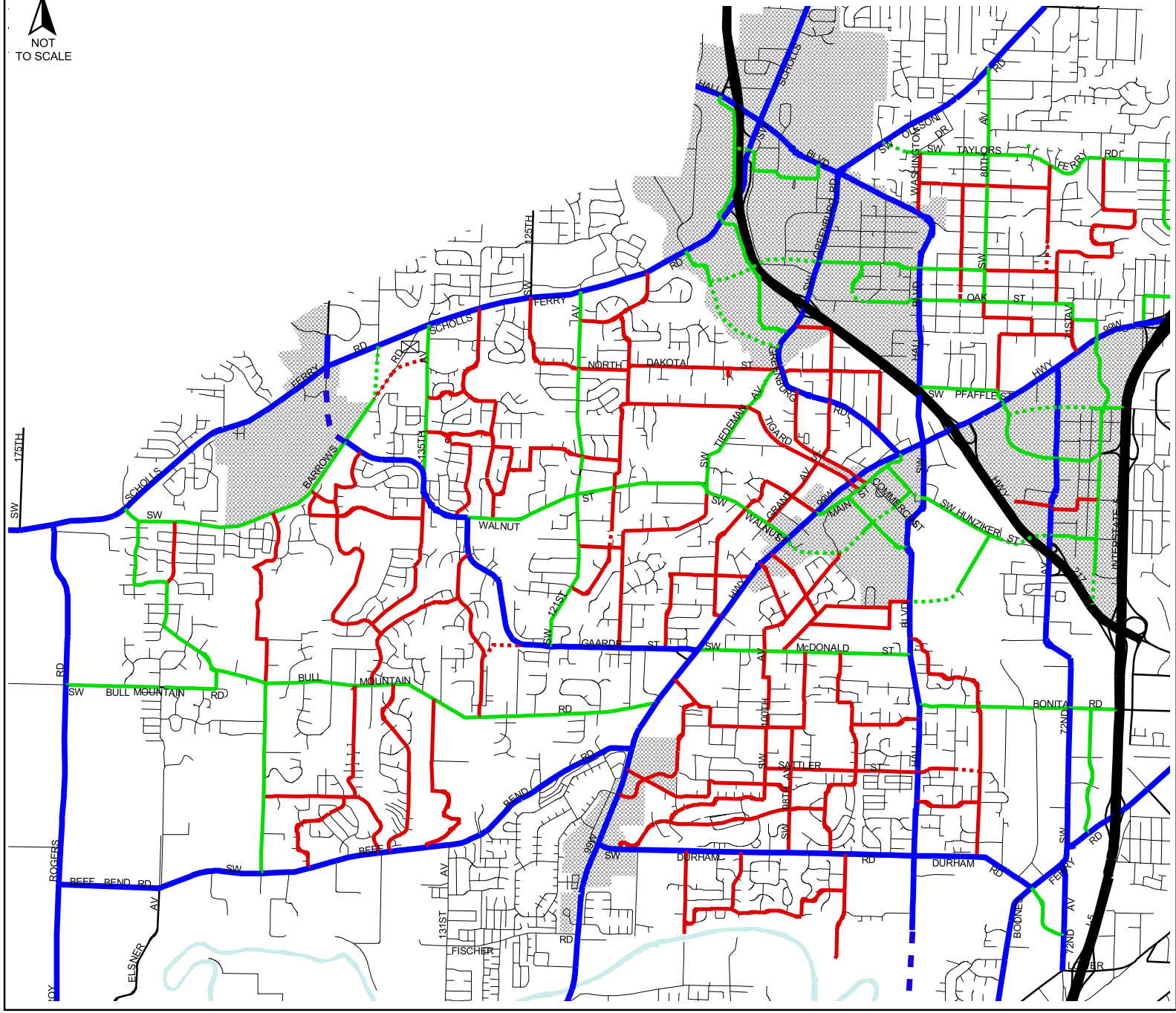

CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Road Closure

Functional Classification

- Proposed Freeway
- Proposed Arterial
- Proposed Collector
- Proposed Neighborhood Route
- Planned Arterial
- Planned Collector
- Planned Neighborhood Route
- Regional Center, Town Center, or Sub Area

*-Transportation facilities in the Tigard Triangle and Washington Square planning areas have specific design regulations and classifications that may slightly differ from those in the TSP for consistency purposes. In these overlay areas, there are specific planning overlay documents for transportation design regulations.

Note: The exact alignment of dashed lines to address physical, access control, right-of-way and environmental constraints in alignment developement.

Figure 8-3
Proposed Functional Classification System

Functional Classification Changes

The proposed functional classification differs from the existing approved functional classification. Neighborhood routes were not defined in the existing functional classification. The proposed functional classification was developed following detailed review of Tigard's, Washington County's and Metro's current functional classification maps. Table 8-1 summarizes the major differences between the proposed functional classification and the existing designations for streets in Tigard. This table also outlines the streets which were previously designated collectors that are now identified as neighborhood routes.

Criteria for Determining Changes to Functional Classification

The criteria used to assess functional classification have two components: the extent of connectivity (as defined above) and the frequency of the facility type. Maps can be used to determine regional, city/district and neighborhood connections. The frequency or need for facilities of certain classifications is not routine or easy to package into a single criterion. While planning textbooks call for arterial spacing of a mile, collector spacing of a quarter to a half mile, and neighborhood connections at an eighth to a sixteenth of a mile, this does not form the only basis for defining functional classification. Changes in land use, environmental issues or barriers, topographic constraints, and demand for facilities can change the frequency for routes of certain functional classifications. While spacing standards can be a guide, they must consider other features and potential long term uses in the area (some areas would not experience significant changes in demand, where others will). Linkages to regional centers and town centers are another consideration for addressing frequency of routes of a certain functional classification. Connectivity to these areas is important, whereas linkages that do not connect any of these centers could be classified as lower levels in the functional classification.

Table 8-1
Proposed Changes to Existing Roadway Classification

	Roadway Classification According to Jurisdiction			
Roadway	**Tigard**	**Wash County**	**Metro**	**Proposed TSP**
Greenburg Road	Major Collector	Minor Arterial/ Major Collector	Major Arterial	Arterial
72nd Avenue	Major Collector	Study Area	Minor Arterial	Arterial
Durham (W. of Hall)	Major Collector	Study Area	Minor Arterial	Arterial
Murray (Scholls Ferry to Barrows)	Major Collector	Proposed Collector	Proposed Collector of Regional Significance	Arterial
Walnut (Barrows to Gaarde)	Major Collector	Proposed Collector	Collector of Regional Significance	Arterial
Gaarde Street	Major Collector	Proposed Collector/ Major Collector	Collector of Regional Significance	Arterial
Beef Bend Road	Major Collector	Major Collector	Collector of Regional Significance	Arterial
Barrows Road	Arterial	Major Collector	Not Classified	Collector
Sequoia Parkway	Not Classified	Not Classified	Not Classified	Collector
Oak St (e of Lincoln)	Not Classified	Not Classified	Not Classified	Collector
Oak St (w of Lincoln)	Minor Collector	Not Classified	Not Classified	Local

Table 8-1 (cont.)

Tech Center Drive	Minor Collector	Not Classified	Not Classified	Local
97th/98th Avenue	Major Collector	Major Collector	Not Classified	Neighborhood

Routes that Change from Minor Collector to Neighborhood Route

135th (s/o Gaarde)	Sunrise Lane	Watkins Avenue	Summerfield Drive
133rd Avenue	Benchview Terrace	Grant Avenue	Sattler Street
130th Avenue	Peachtree Drive	Park Street	Ross Street
128th Avenue	Morning Hill Drive	Johnson Street	Alderbrook Drive
115th Avenue	Falcon Rise Drive	Commercial Street	Pinebrook Street
109th Avenue	Winter Lake Drive	Shady Lane	
98th Avenue	North Dakota St.	Washington Drive	
95th Avenue	Springwood Drive	Ash Avenue	
79th Avenue	Tigard Street	O'Mara Street	
74th/72nd Avenue	Fonner Street	Canterbury Lane	

Changes from Collector or Local designation to Neighborhood Route (see Figure 8-4)

Metzger Area	**South Tigard**	**Central Tigard**	**North Dakota Area**	**Southwest**
Washington Drive	Sattler Street	Shady Lane	North Dakota Street	Horizon Boulevard
Cedarcrest Street	Pinebrook Street	95th Avenue	Springwood Drive	Creekshire Drive
82nd Avenue	Alderbrook Drive	Dakota Street	115th Avenue	Fern Street
Locust Street	92nd Avenue	90th Avenue	Tigard Street	Ascension Drive
74th Avenue	Inez Street	98th Avenue	Tigard Drive	Windsong Court
69th Avenue	93rd Avenue	Commercial Street	116th Avenue	Northview Drive
Alfred Street	97th Avenue	Tigard Street	Ann Street	Mistletoe Drive
Ventura Court	Murdock Street	Grant Avenue	Katherine Street	135th Avenue
Ventura Drive	98th Avenue	Johnson Street	125th Avenue	Essex Drive
72nd Avenue	100th Avenue	Brookside Avenue	Karen Street	Benchview Terrace
80th Avenue	103rd Avenue	Watkins Avenue	127th Avenue	132nd Avenue
Pine Street	Canterbury Lane	Park Street	128th Avenue	Greenfield Drive
75th Street	Highland Drive	110th Avenue	Winter Lake Drive	Menlor Lane
Spruce Street	Summerfield Drive	115th Avenue	130th Avenue	Sunrise Lane
78th Avenue	92nd Avenue	Fonner Street	Brittany Drive	150th Avenue
69th Avenue	108th Avenue	116th Avenue	Morning Hill Drive	Uplands Drive
East Tigard	Riverwood Lane	Howard Drive	Falcon Rise	141st Avenue
Fanno Creek Drive	Copper Creek Drive	Garrett Street	131st Avenue	Woodhue Street
79th Avenue	Millen Drive	Frewing Street		Tewkesbury Drive
Ross Street	River Drive	Ash Avenue		Barrington Terrace
Ashford Street	Tualatin Drive	O'Mara Street		Westminster Drive
		Edgewood Street		Peachtree Drive
				133rd Avenue

The proposed changes in functional classification on Durham Road, Murray Boulevard, Gaarde Street, 72nd Avenue, Greenburg Road and Beef Bend Road affect Washington County roadways. These proposed changes have been discussed with County staff and the County is in the process of reviewing these changes.

DKS *Associates*

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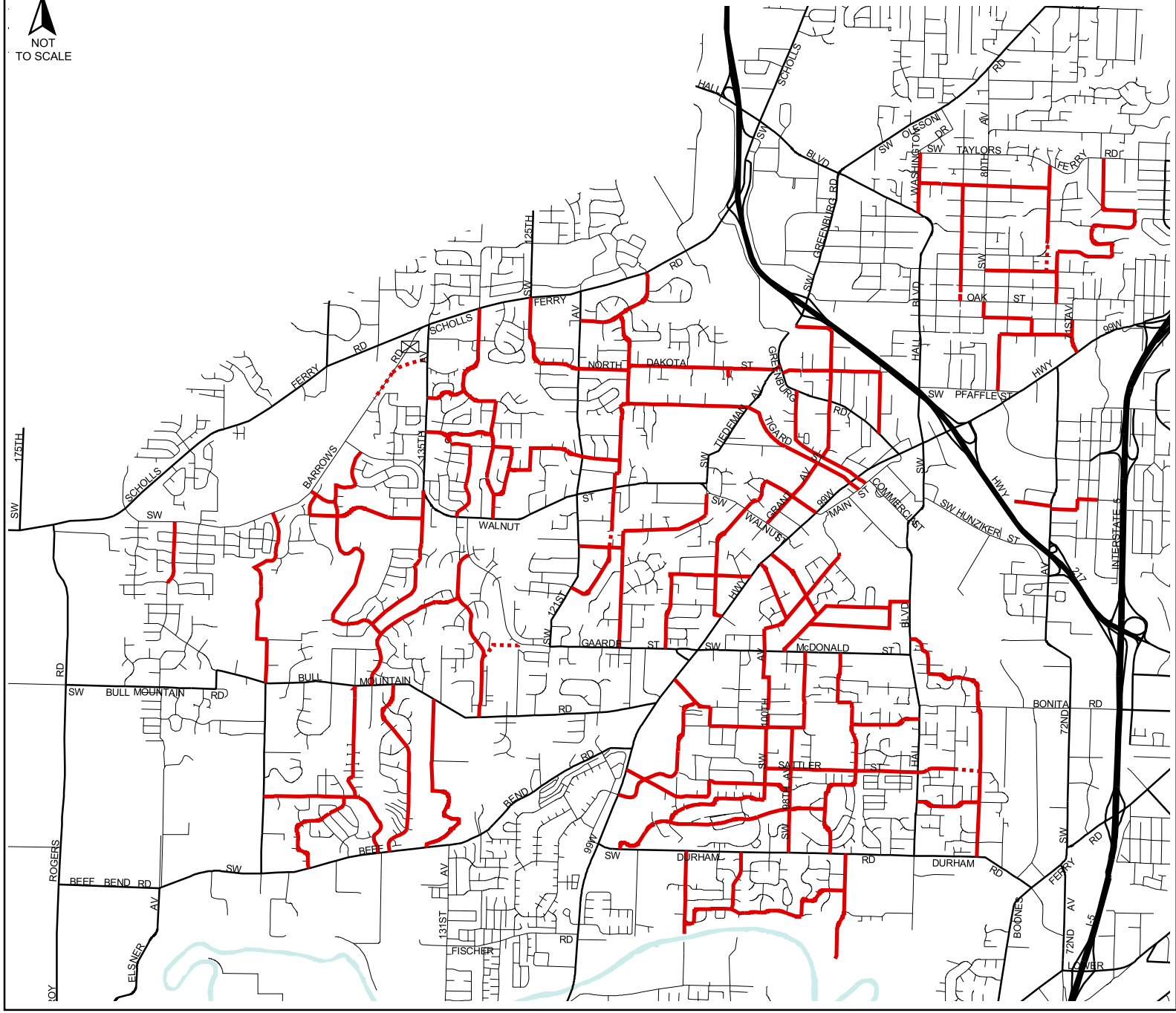

CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

Road Closure

Neighborhood Routes

Proposed

Planned

Figure 8-4
Proposed Neighborhood Routes

Characteristics of Streets for each Functional Classification

The design characteristics of streets in Tigard were developed to meet the function and demand for each facility type. Because the actual design of a roadway can vary from segment to segment due to adjacent land uses and demands, the objective was to define a system that allows standardization of key characteristics to provide consistency, but also to provide criteria for application that provides some flexibility, while meeting standards. Figures 8-5 to 8-10 depict sample street cross-sections and design criteria for arterials, collectors, neighborhood routes and local streets. Figure 8-5 shows the Existing Tigard Standard Cross-Sections, Figure 8-6 and 8-7 shows Washington County's Standard Cross-Sections (these apply to Washington County owned roadways) and Figures 8-8 through 8-10 show the *proposed* Tigard Standard Cross-Sections. Planning level right-of-way needs can be determined utilizing these figures and Table 8-2 and the lane geometry outlined later in this chapter. Specific right-of-way needs will need to be monitored continuously through the development review process to reflect current needs and conditions[6] (that is to say that more specific detail may become evident in development review which requires improvements other than these outlined in this 20 year general planning assessment of street needs).

The analysis of capacity and circulation needs for Tigard outlines several roadway cross sections. The most common are 2, 3 and 5 lanes wide. Where center left turn lanes are identified (3 or 5 lane sections), the actual design of the street may include sections without center turn lanes (2 or 4 lane sections[7]) or with median treatments, where feasible. The actual treatment will be determined within the design and public process for implementation of each project. The plan outlines requirements which will be used in establishing right-of-way needs for the development review process. The right-of-way (ROW) requirements for arterial and collector streets on the Washington County system are 50-74 feet for collector streets, 90 feet for three-lane arterials and 90-122 feet for four-to-seven-lane arterials[8].

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6 For example, designations by Metro, ODOT and Washington County all play a role in the ROW determination.

7 For example, adjacent to environmentally sensitive or physically constrained areas.

8 Washington County Uniform Road Improvement Design Standards, Ordinance No. 524, Adopted July 28, 1998, pages 13-18.

Table 8-2
Proposed Street Characteristics

Vehicle Lane Widths: (minimum widths)	Truck Route = 12 feet Bus Route = 11 feet Arterial = 12 feet Collector = 11 feet Neighborhood = 10 feet Local = 9[9] to 10 feet Turn Lane = 12 feet[10]
On-Street Parking:	8 feet[11]
Bicycle Lanes: (minimum widths)	New Construction = 6 feet Reconstruction = 5 to 6 feet
Curb Extensions for Pedestrians:	Consider on any Pedestrian Master Plan Route
Sidewalks: (minimum width)	Local = 5 feet[12] Neighborhood = 5 feet[12] Collector = 6 to 8[13] feet Arterial = 6 to 10[13] feet
Landscape Strips:	Residential/Neighborhood = Required Collector/Arterial = Required
Medians:	5-Lane = Required 3-Lane = Optional
Neighborhood Traffic Management:	Local = Should not be necessary Neighborhood = Should Consider Collectors = Under Special Conditions Arterials = Only under Special Conditions
Transit:	Arterial/collectors = Appropriate Neighborhood = Only in special circumstances
Turn Lanes:	When Warranted[14]
Access Control:	See later section for Arterials and Collectors

[9] 9 foot lanes would only be used in conjunction with on-street parking.

[10] In constrained conditions on collectors, neighborhood and local routes, a minimum width of 10 feet may be considered (except on bus routes)

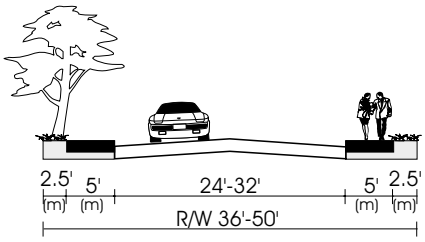
[11] For 32 foot streets, the City recognizes that there will not be 20 feet of unobstructed pavement.

[12] 5 foot with landscape strip, 6 foot against curb.

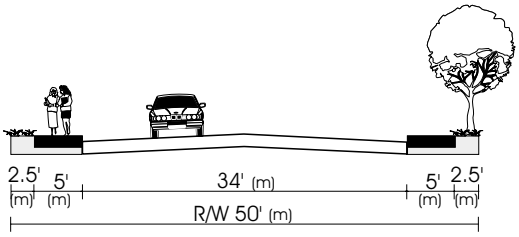
[13] Larger sidewalks than minimums should be considered for areas with significant pedestrian volumes. In commercial areas where pedestrian flows of over 100 pedestrians an hour are present or forecast, specific analysis should be conducted to size sidewalks appropriately for safe movement.

[14] Turn lane warrants should be reviewed using Highway Research Record, No. 211, NCHRP Report No. 279 or other updated/superseding reference.

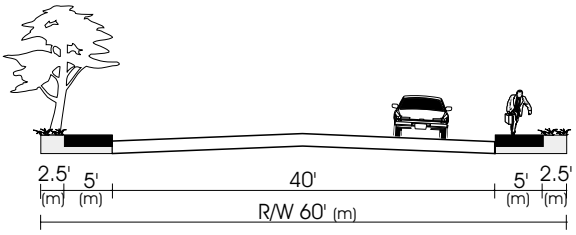
Local Street
Residential



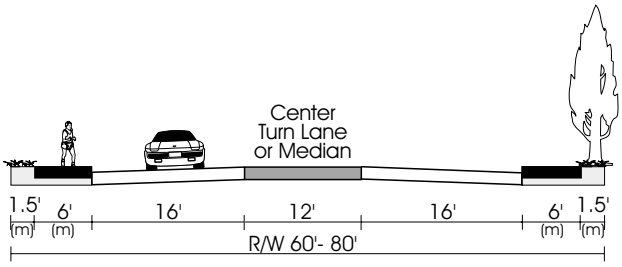
Local Street
Commercial & Industrial



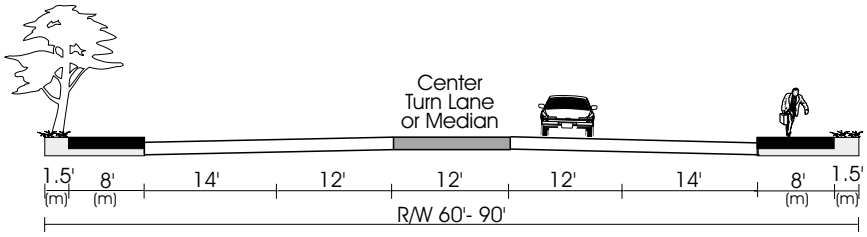
Minor Collector



Major Collector



Arterial

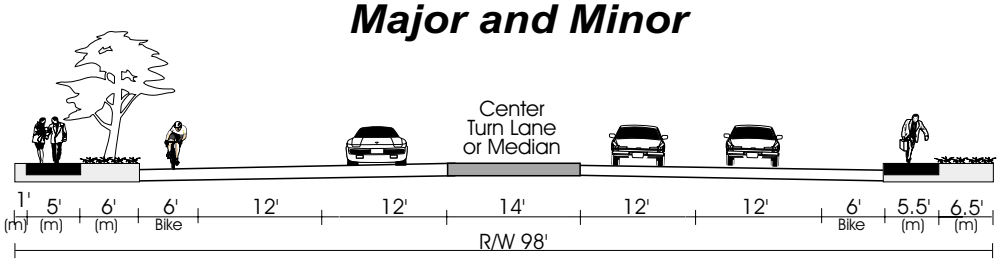


(m) - Minimum Required Width

Figure 8-5
EXISTING
TYPICAL STREET CROSS SECTIONS

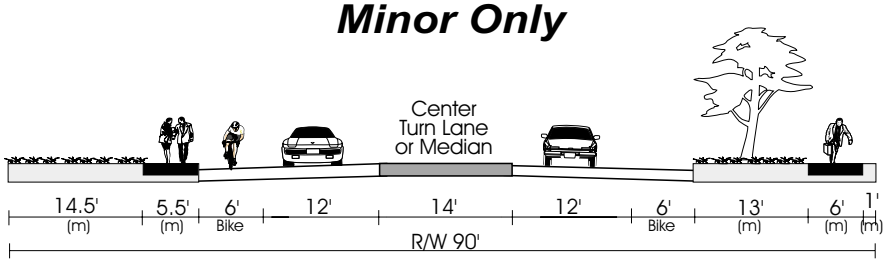
CITY OF TIGARD
Transportation System Plan

Arterial Major and Minor



5 Lanes

Arterial Minor Only



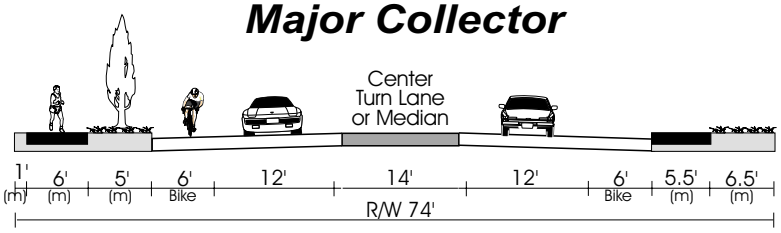
3 Lanes

(m) - Minimum Required Width

Figure 8-6
WASHINGTON COUNTY ARTERIAL TYPICAL STREET CROSS SECTIONS

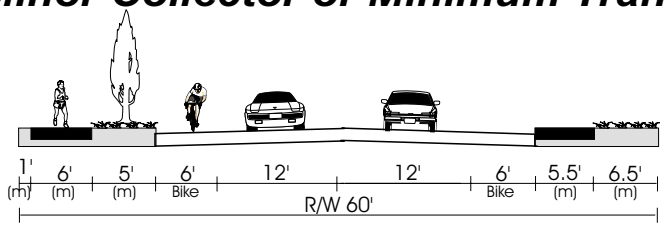
CITY OF TIGARD
Transportation System Plan

Major Collector



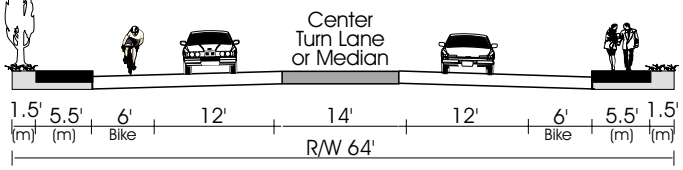
3 Lanes

Minor Collector or Minimum Transit



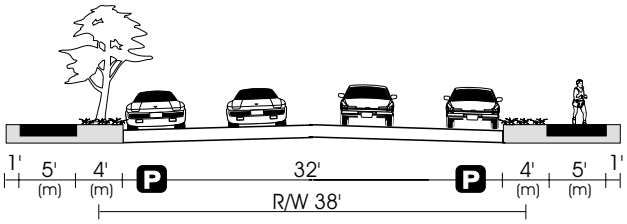
2 Lanes

Commercial and Industrial



3 Lanes

Local Street (Standard)



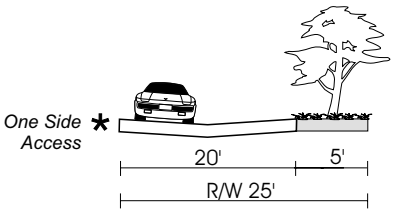
Parking Both Sides

(m) - Minimum Required Width
P - *On-street Parking*

Figure 8-7
WASHINGTON COUNTY
TYPICAL STREET CROSS SECTIONS

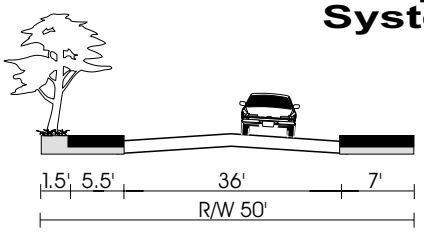
CITY OF TIGARD

Transportation System Plan

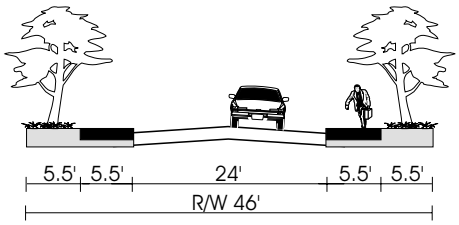


Alley

(No parking)



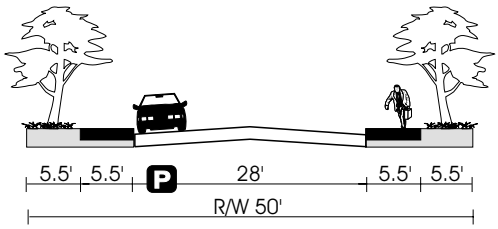
Industrial/Commercial Local



Cul-de-sac/Residential Local Street

<200 vpd

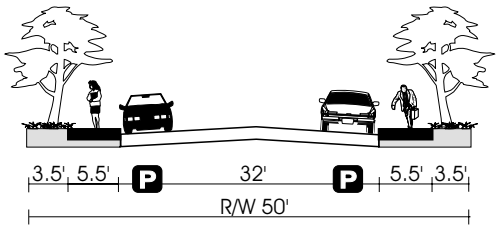
(No parking)



Residential Local Street/Cul-de-sac

One Side On-street Parking

<500 vpd



On-street Parking

<1500 vpd *

If parking on both sides, block length not to exceed 600 feet

Notes:

1. *Selection of placement of sidewalk and planter strip specific to application.*
2. *Width of curb is included in sidewalk width when adjacent to street.*
3. *Samples show the desirable applications given number of lanes; minimum standards can be applied case by case.*
4. *Actual width of street and sidewalk area can be adjusted within R/W based on modal priorities and adjacent land use.*
5. *Volume guides represent estimated Full Buildout Conditions, not just existing or project needs.*
6. *The 36' street shall be used in any area adjacent to commercial or industrial zoning. Sidewalk would be 7' curb tight in Commercial areas and 5.5' for Industrial areas (cross section shows both samples).*
7. *Where existing street curb to curb widths vary from those shown, the minimum length of new cross section should be (or have the potential to be) 500 feet contiguous.*

P *- On-street Parking*

<1500 vpd *- Guide for Traffic Volume Per Day (does not require conversion of existing routes)*

* *Where volume exceeds 1500 vpd, this cross section may still be utilized however land use actions or roadway projects impacting such streets may require additional connectivity to reduce volume and/or neighborhood traffic management measures to reduce impacts.*

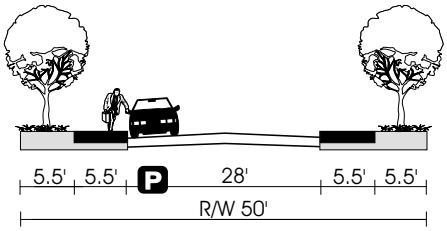
Criteria

Vehicle Lane Widths: *(minimum widths)*	*9 to 10 ft.*
On-Street Parking	*8 ft.*
Sidewalks: *(minimum width)*	*5 ft.*
Landscape Strips:	*Where Appropriate*
Neighborhood Traffic Management:	*Should not be necessary (under special conditions & over 1500 vpd)*

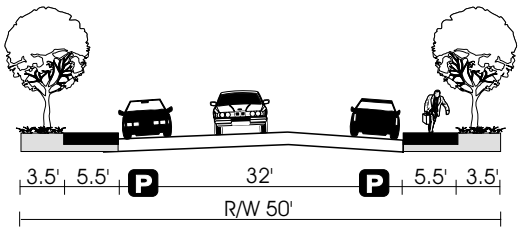
Figure 8-8

ALLEY, CUL-DE-SAC AND LOCAL STREET SAMPLE STREET CROSS SECTIONS REQUIRED ROW WIDTH

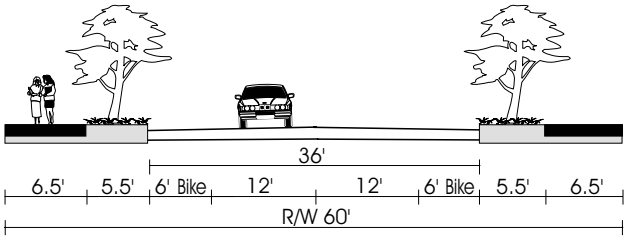
CITY OF TIGARD
Transportation System Plan



No Parking on One Side



With Parking on Both Sides



With Bike Lanes / No Parking

Notes:

1. *Selection of placement of sidewalk and planter specific to application.*
2. *Width of curb is included in sidewalk width when adjacent to street.*
3. *Samples show the desirable applications given number of lanes; minimum standards can be applied case by case.*
4. *Actual width of street and sidewalk area can be adjusted within R/W based on modal priorities and adjacent land use.*
5. *These are guidelines for future neighborhood route development and does not require changes/conversion to existing streets.*

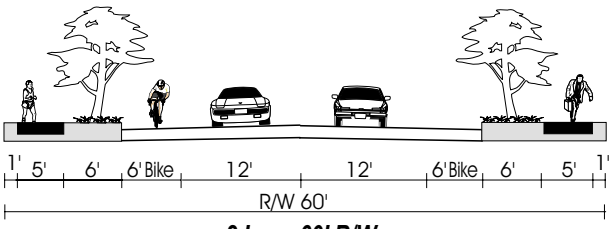
Criteria

Vehicle Lane Widths: *(minimum widths)*	*9-10 ft.*
On-Street Parking	*8 ft.*
Curb Extensions for Pedestrians:	*Consider on Pedestrian Routes*
Sidewalks: *(minimum width)*	*5 ft.*
Landscape Strips:	*Where Appropriate*
Neighborhood Traffic Management:	*Appropriate when Warranted*

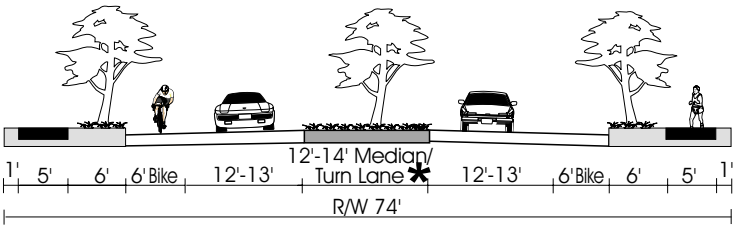
P - *On-street Parking*

Figure 8-9
NEIGHBORHOOD
SAMPLE STREET CROSS SECTIONS
REQUIRED ROW WIDTH

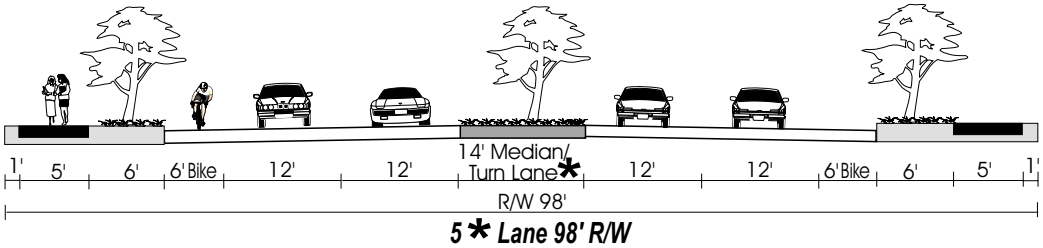
CITY OF TIGARD
Transportation System Plan



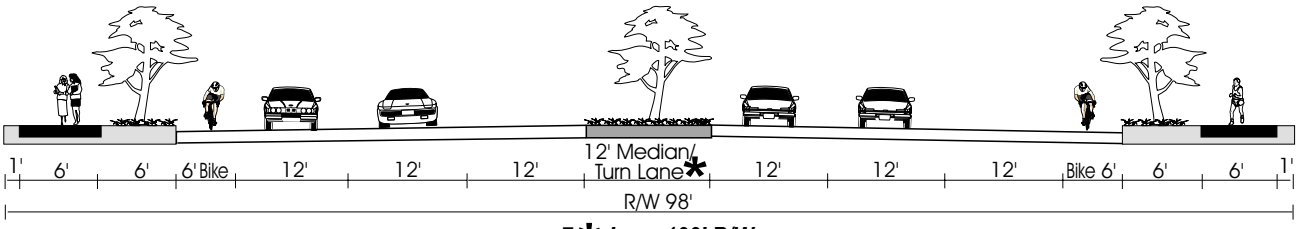
2 Lane 60' R/W



3* Lane 74' R/W



5* Lane 98' R/W



7* Lane 122' R/W

Criteria

Vehicle Lane Widths: *(minimum widths)* ***Collector***	*Truck Route = 12 ft.* *Bus Route = 12 ft.* *11 ft. (12 ft. Preferred)* *10-11 ft.*
On Street Parking:	*None (with few existing exceptions)*
Bicycle Lanes: *(minimum widths)*	*New Construction = 6 ft.* *Reconstruction = 5 to 6 ft.*
Sidewalks: *(minimum width)*	*5-13 ft. Consider Curb Extensions on Ped Routes*
Landscape Strips:	*Required*
Medians:	*5/7 Lane = Required* *3 Lane = Optional*
Neighborhood Traffic Management:	*Only Under Special Conditions: Selected Measures*

** Note that, sidewalk widths above 6 ft. may require additional right-of-way. Where appropriate, the median/lane may not be provided resulting in 2,4 and 6 lane cross sections. The removal of the center turn lane must consider both safety and pedestrian needs.*

Figure 8-10
ARTERIAL AND COLLECTOR SAMPLE STREET CROSS SECTIONS REQUIRED ROW WIDTH

Wherever arterial or collectors cross each other, planning for additional right-of-way to accommodate turn lanes should be considered within 500 feet of the intersection. Figure 8-11 summarizes the Tigard streets that are anticipated within the TSP planning horizon to require right-of-way for more than two lanes. Planning level right-of-way needs can be determined utilizing Figure 8-11 and the lane geometry outlined later in this chapter. Specific right-of-way needs will need to be monitored continuously through the development review process to reflect current needs and conditions. This will be necessary since more specific detail may become evident in development review which requires improvements other than these outlined in this 20 year general planning assessment of street needs.

These cross sections are provided for guiding discussions that will update the City of Tigard *Public Improvement Design Standards for Public Works Construction*. There is an on-going discussion at the regional level regarding street cross sections. Several of the major streets in Tigard are maintained and operated by Washington County or ODOT. Metro has specified Regional Street Design designations in their draft of the RTP[15]. These designations change over the length of the road. The City of Tigard will need to coordinate with regional agencies to assure consistency in cross section planning as the County Transportation Plan and the Metro Regional Transportation Plan move forward. The designations are summarized in Table 8-3. The Metro definitions for their designations are provided in the Appendix.

Table 8-3
Metro Regional Street Design and Motor Vehicle Designations

Roadway	Regional Street Design	Motor Vehicle Classification
ORE 217	Freeway	Principal Arterial (Freeway)
I-5	Freeway	Principal Arterial (Freeway)
ORE 99W	Regional St./Regional Boulevard	Major Arterial
Scholls Ferry Road	Regional St./Regional Boulevard	Major Arterial
Greenburg Road	Regional St./Regional Boulevard	Major Arterial
Hall Boulevard (Scholls Ferry to Greenburg)	Regional Boulevard	Major Arterial
Hall Boulevard (Greenburg to South City Limits)	Community St./Community Blvd	Minor Arterial
Durham Road	Community Street	Minor Arterial
72nd Avenue	Urban Road	Minor Arterial
Upper Boones Ferry Road	Urban Road	Minor Arterial
Beef Bend Road (West of City Limits to Scholls Ferry)	Rural Road	Rural Arterial
Dartmouth Street	Community Street	Collector of Regional Significance
Gaarde/Walnut/Murray	Community Street	Collector of Regional Significance
McDonald Street	Community Street	Collector of Regional Significance
Beef Bend Rd (East of City Limits)	Community Street	Collector of Regional Significance

NOTE: Refer to Metro's RTP Policy Chapter for background on guidelines for streets, 1997.

[15] Refer to Regional Street Design System, Preliminary Draft RTP, Metro, June 17, 1999.

DKS *Associates*

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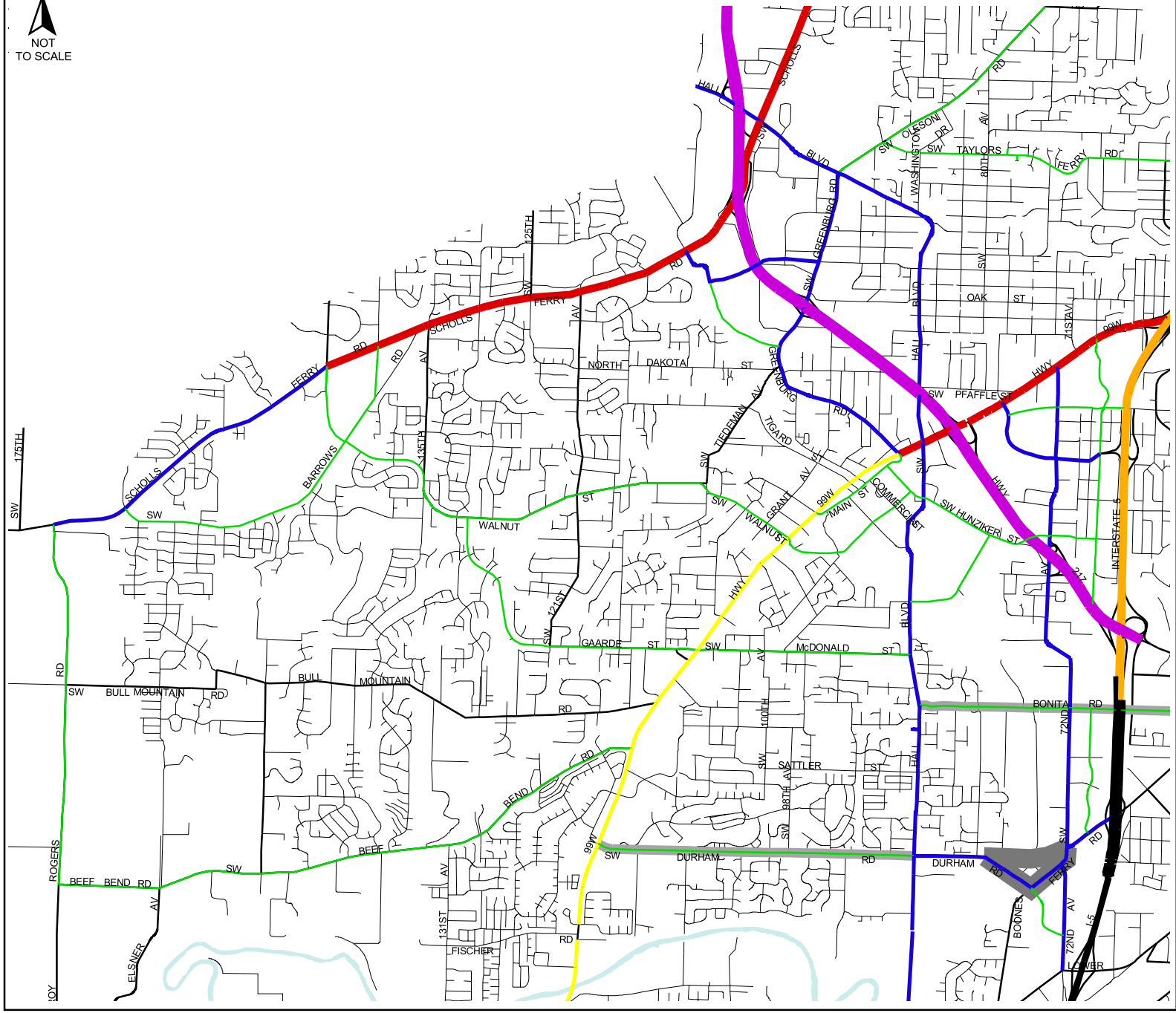


CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

Planned Right of Way

- 8 Lanes
- Added Person Capacity Corridor*
- 7 Lanes
- 6 Lanes
- 5 Lanes
- 4/5 Lanes
- 2/3 Lanes
- SP**
- Corridor Alingment Study Area

* Assume eight lanes for setbacks

** Preserve ROW for 5 lanes in Future

Note: All Arterial/Arterial, Arterial/Collector and Collector/Collector intersections should plan for needed ROW for turn lanes within 500 feet of the intersection.

2/3 and 4/5:
Two or four lanes may be used for segments where environmental constraints limit roadway and access is controlled to eliminate left turn lane need.

Figure 8-11
Future Streets Where ROW is Planned for More Than Two Lanes

Connectivity/Local Street Plan

Much of the local street network in Tigard is already existing and, in many cases, fairly well connected. In other words, multiple access opportunities exist for entering or exiting neighborhoods. However, there are a number of locations in Tigard where, due to the lack of connection points, the majority of neighborhood traffic is funneled onto one single street. This type of street network results in out-of-direction travel for motorists and an imbalance of traffic volumes that impacts residential frontage. The outcome can result in the need for wider roads, traffic signals and turn lanes (all of which negatively impact traffic flow and degrade safety). By providing connectivity between neighborhoods, out-of-direction travel and vehicle miles traveled (VMT) can be reduced, accessibility between various modes can be enhanced and traffic levels can be balanced out between various streets. Several goals and policies established by this TSP are intended to accomplish these objectives.

In Tigard, some of these local connections can contribute with other street improvements to mitigate capacity deficiencies by better dispersing traffic. Several roadway connections will be needed within neighborhood areas to reduce out of direction travel for vehicles, pedestrians and bicyclists. This is most important in the sub-areas to the west where a significant amount of new development is possible (i.e. Bull Mountain area). In many areas of Tigard, most of the land is built out. Figures 8-12 through 8-17 show the proposed Local Street Connectivity Plans for Tigard. In most cases, the connector alignments are not specific and are aimed at reducing potential neighborhood traffic impacts by better balancing traffic flows on neighborhood routes. The arrows shown in the figures represent potential connections and the general direction for the placement of the connection. In each case, the specific alignments and design will be better determined upon development review. The criteria used for providing connections is as follows[16]:

- Every 330 feet, a grid for pedestrians and bicycles
- Every 530 feet, a grid for automobiles

To protect existing neighborhoods from potential traffic impacts of extending stub end streets, connector roadways should incorporate neighborhood traffic management into their design and construction. Neighborhood traffic management is described later in this chapter. All stub streets should have signs indicating the potential for future connectivity.

The arrows shown on the local connectivity figures indicate priority connections only. Topography, railroads and environmental conditions limit the level of connectivity in Tigard. Other stub end streets in the City's road network may become cul-de-sacs, extended cul-de-sacs or provide local connections. Pedestrian connections from the end of any stub end street that results in a cul-de-sac should be considered mandatory as future development occurs. The goal would continue to be improved city connectivity for all modes of transportation.

[16] The Regional Transportation Plan calls for pedestrian/bicycle connectivity every 330 feet and motor vehicle connectivity every 530 feet for vacant areas of residential and mixed use zoning greater than five acres.

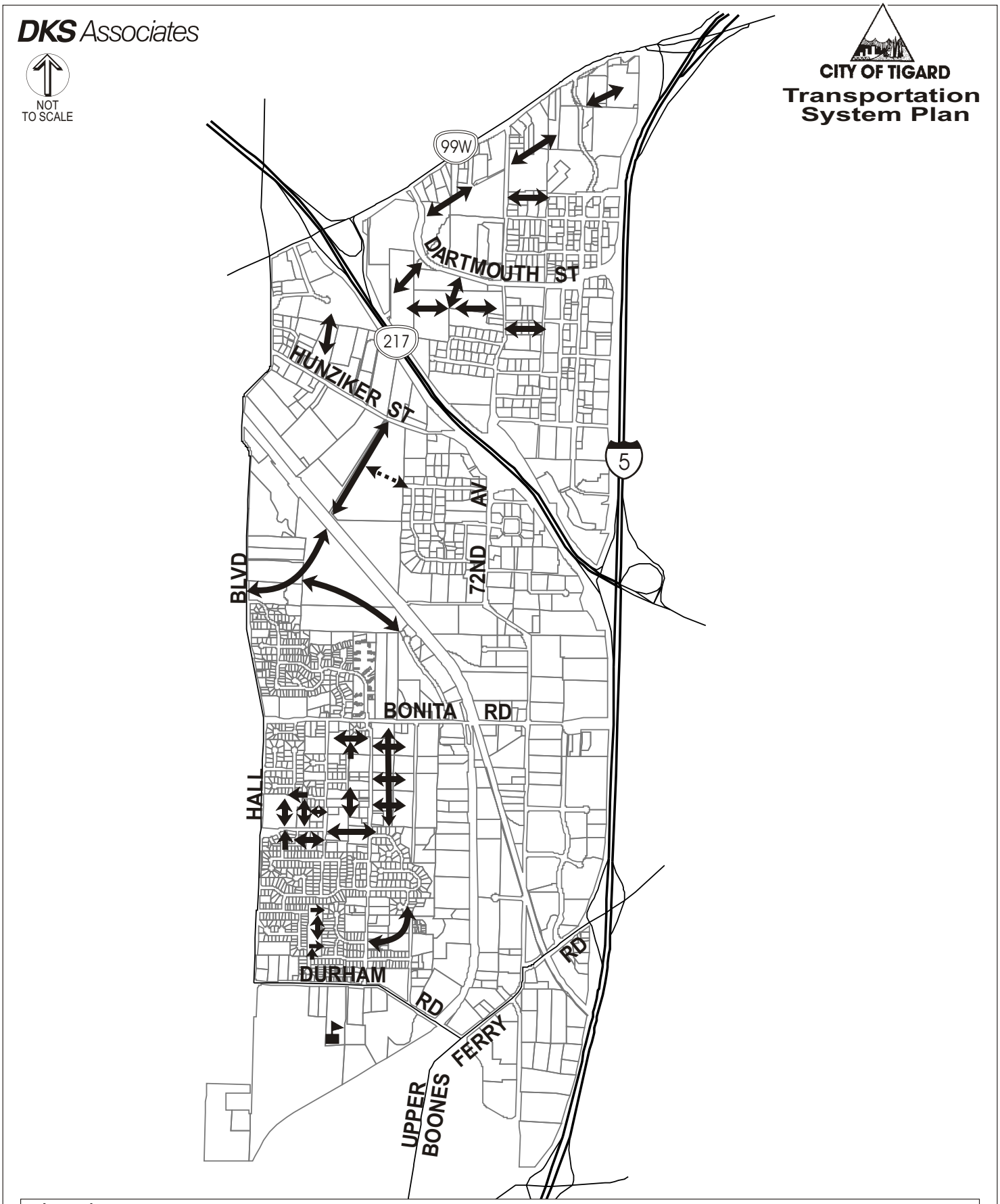
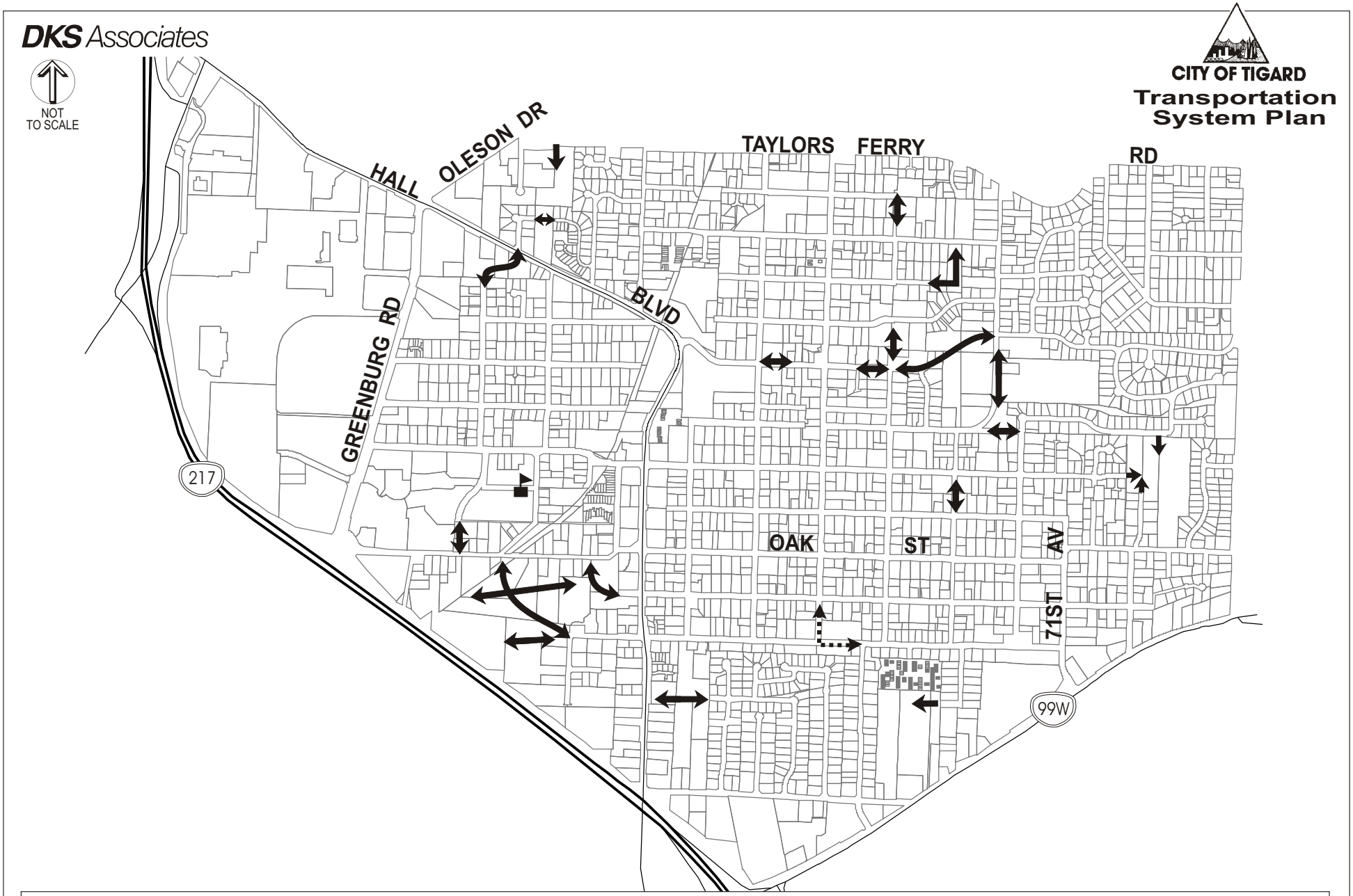


Figure 8-12
LOCAL STREET CONNECTIVITY
East Tigard



Legend

- Stub End Street
- Pedestrian Connection
- School Site

Figure 8-13
LOCAL STREET CONNECTIVITY
Metzger

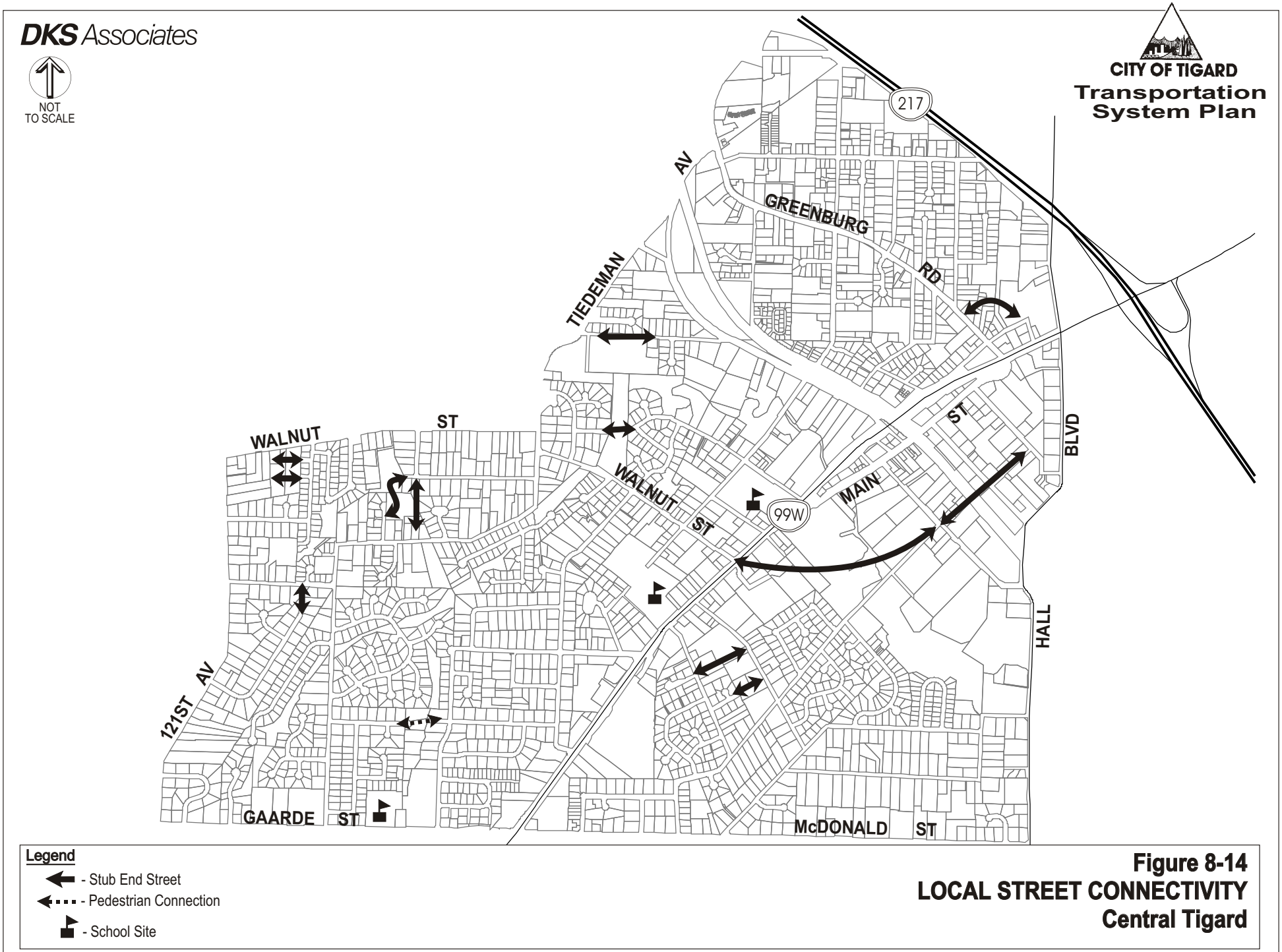
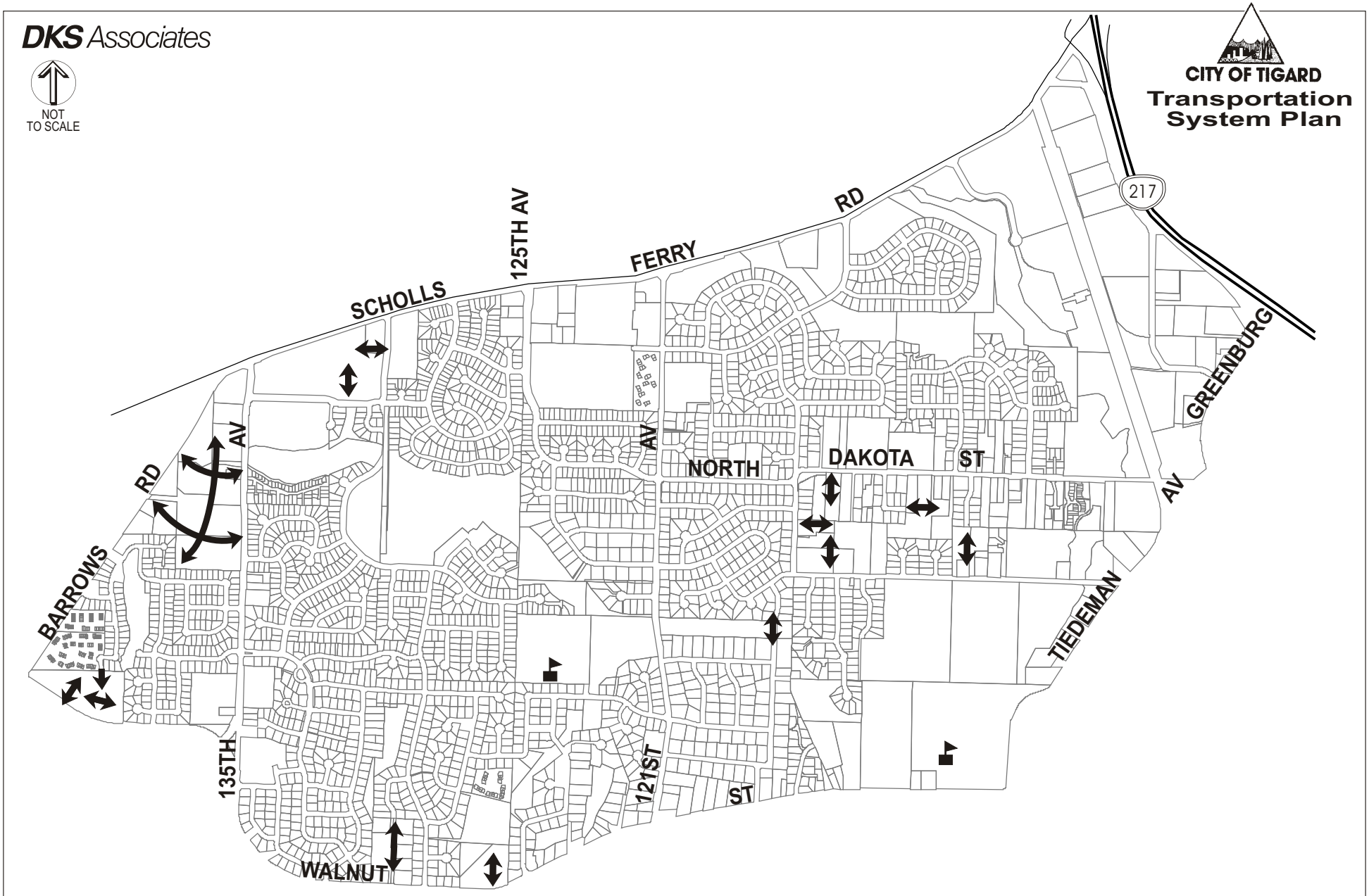


Figure 8-14
LOCAL STREET CONNECTIVITY
Central Tigard



Legend

- Stub End Street
- Pedestrian Connection
- School Site

Figure 8-15
LOCAL STREET CONNECTIVITY
North Dakota

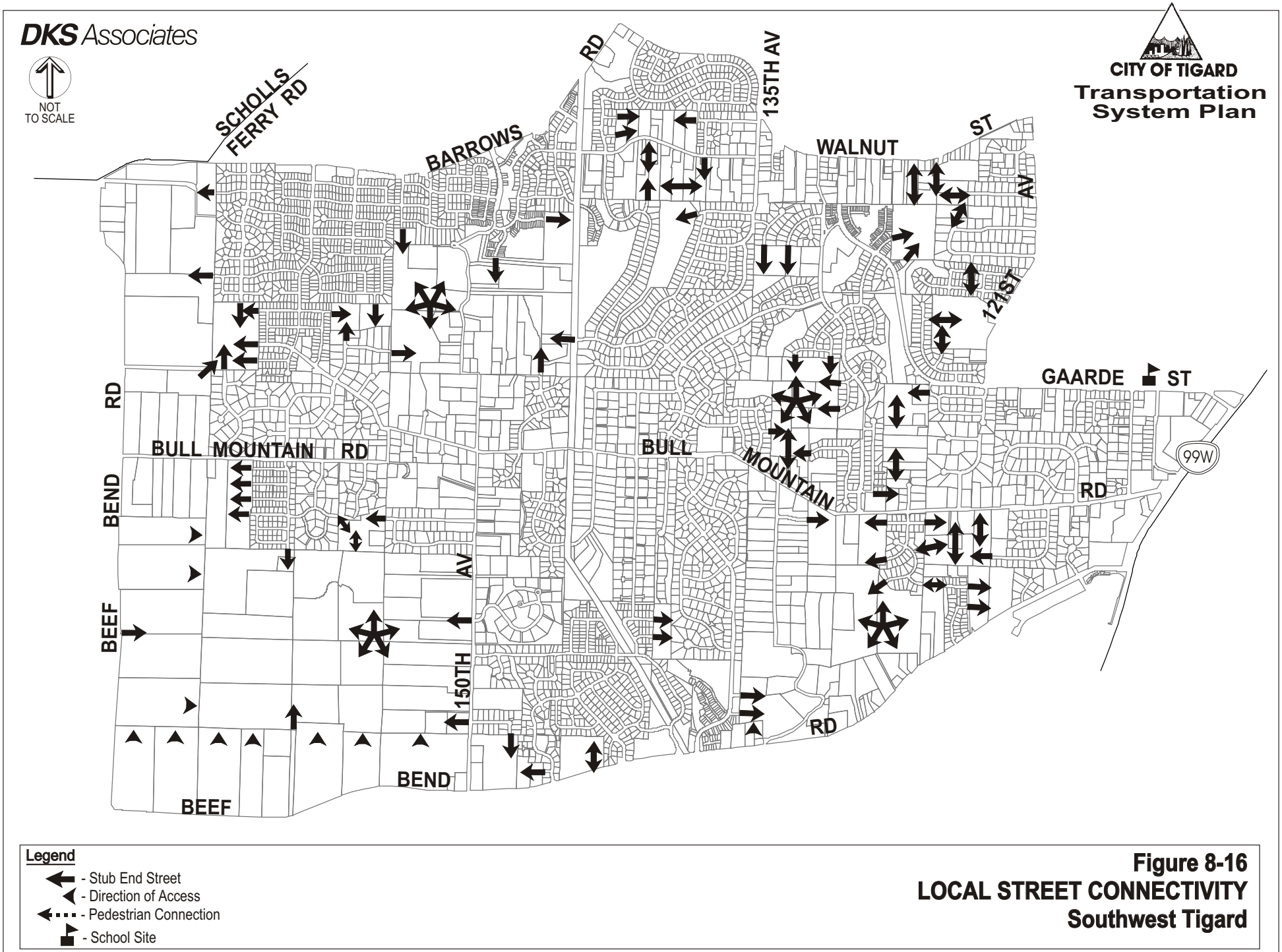


Figure 8-16
LOCAL STREET CONNECTIVITY
Southwest Tigard

DKS Associates

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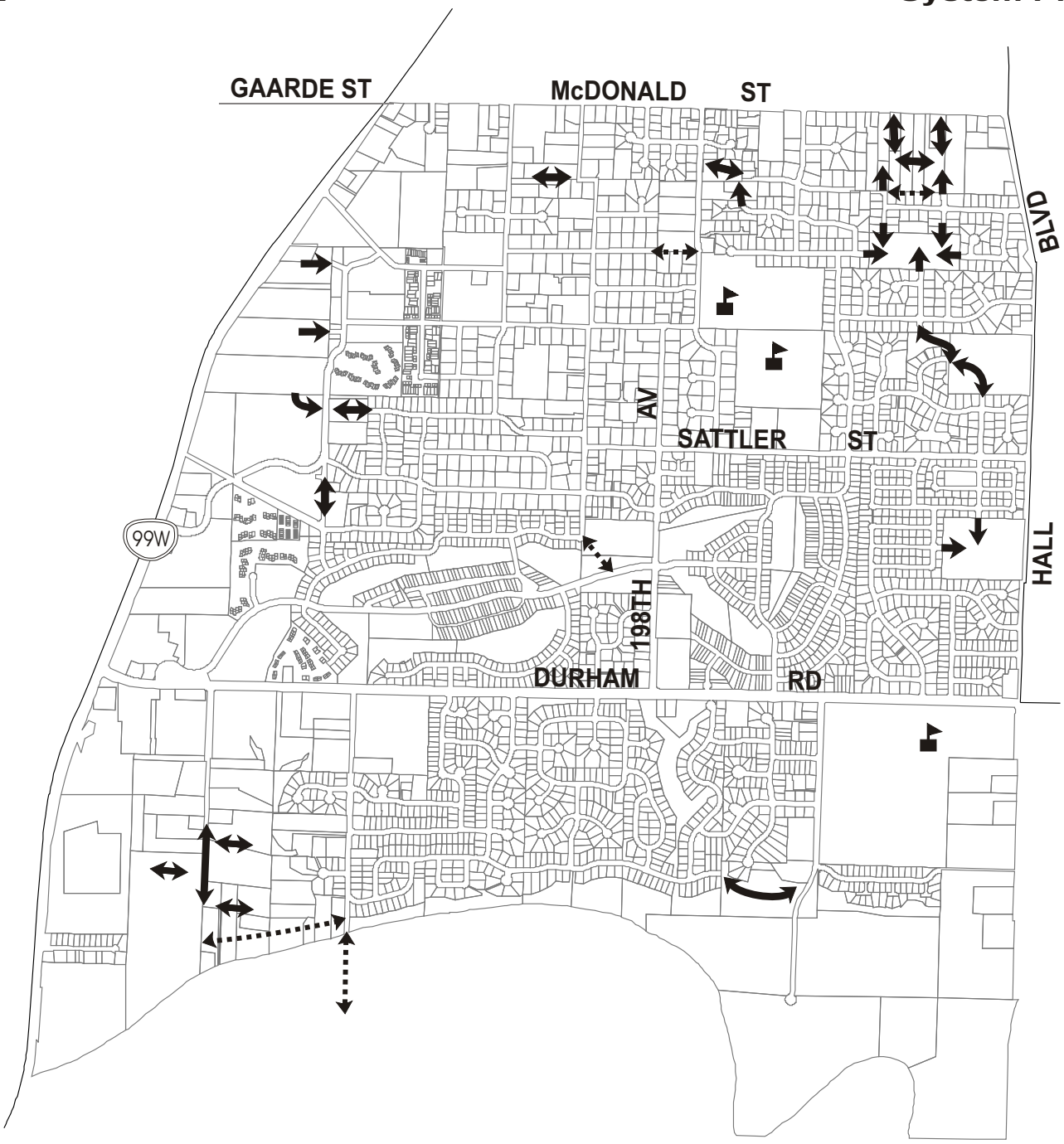
CITY OF TIGARD
Transportation System Plan



Legend
- Stub End Street
- Pedestrian Connection
- School Site

Figure 8-17
LOCAL STREET CONNECTIVITY
South Tigard

CIRCULATION AND CAPACITY NEEDS

The motor vehicle capacity and circulation needs in Tigard were determined for existing and future conditions. The process used for analysis is outlined below, followed by the findings and recommendations of the analysis. The extent and nature of the street improvements for Tigard are significant. This section outlines the type of street improvements that would be necessary as part of a long range master plan. Phasing of implementation will be necessary since all the improvements cannot be done at once. This will require prioritization of projects and periodic updating to reflect current needs. It should be understood that the improvements outlined in the following section are a guide to managing growth in Tigard, defining the types of right-of-way and street needs that will be required as development occurs.

Strategies

A series of strategies were developed to address the future motor vehicle needs of Tigard. Each of these strategies were discussed by the TSP Task Force and prioritized. The initial prioritization was reviewed and refined following discussion about the implications of the high priority strategies. The actual strategy selected is a prioritization of the highest priority strategies. The following listing reflects the initial prioritization of strategies.

- Promote Regional Circulation (I-5, ORE 217, ORE 99W)
- Improve Local Street Circulation (connectivity)
- Provide Additional Street System Capacity to LOS D[17] (turn lanes, signals, widening, new roads)
- Improve Operation of Existing System (signal coordination, intelligent transportation systems, neighborhood traffic management)
- Transportation Demand Management (telecommuting, alternative modes, pricing)
- Change Land Use to Promote Alternative Modes Use
- Improve Access Control to increase capacity
- Change Level of Service Definitions

Model Forecasts

Existing conditions were identified in Chapter 3. Future capacity needs were developed using a detailed travel demand forecast tool, based on the Metro regional travel demand model. This detailed model more accurately reflects access and land use in Tigard than the regional travel demand model. Evening peak hour traffic volumes were forecast for the future (modified year 2015 buildout) scenario for the Tigard area. This 2015 forecast included the highest level of transit service given regional funding constraints. It also assumes that Transportation Demand Management (TDM) will occur. The initial 2015 test was performed on a street network that included existing roads, plus those improvements which are currently funded and would likely be implemented before the 2015 scenario is reached. The most significant of these improvements in Tigard include the following:

[17] Level of service D as defined by the Highway Capacity Manaul.

- ORE 217 widened one additional lane each direction and the ORE 217/I-5 interchange improvements
- Gaarde Street linking from ORE 99W to Murray Boulevard
- Walnut Street improved to three lanes
- Dartmouth Street as five lanes from ORE 99W to I-5
- Hall Boulevard as a continuous three lane roadway with improvements at ORE 99W

The modified 2015 forecast for Tigard is unique in that it reflect greater land use in Tigard than the Metro 2015 forecast (reflective of a build out-like scenario). 2015 was used as a base rather than the 2020 because of the greater Tigard trip generation and detailed network included in the 2015 forecast. A separate 2020 forecast was done for a sensitivity analysis of recommended motor vehicle improvements to validate their need.

Future Needs

Future transportation conditions were evaluated in a similar manner to existing conditions. Improvements to intersections, roadways between intersections and brand new or extended facilities were considered and a package of recommended improvements was determined. Where level of service conditions approached level of service E or volume-to-capacity ratio of 0.90 or above, improvements were initially considered. The final conditions for mitigation were set at conditions below V/C of 1.0 and level of service E. Table 8-4 summarizes the intersection levels of service under year 2015 base future conditions and the recommended mitigated scenario.

In summary, nearly half of the study intersections fail in the future, even with funded roadway improvements. The extent of failure is so severe that it is unlikely that the land use scenario assumed for the modified 2015 forecast would be achieved with the extent of congestion. Because of this many alternatives were evaluated in developing the recommended set of mitigation measures for the TSP. The following sections explore the options and the findings for each alternative.

Table 8-4
2015 Intersection Level of Service
PM Peak Hour

Intersection	**2015 Base**	**2015 Mitigated**
Signalized Intersections (future)	*Delay LOS V/C*	
Davies/Scholls Ferry Road	>60.0 F >1.0	33.2 C 0.89
Barrows (E)/Scholls Ferry Road	11.1 B 0.73	15.3 B 0.93
North Dakota/125th/Scholls Ferry Road	>60.0 F >1.0	38.7 D 0.95
Nimbus/Scholls Ferry Road	>60.0 F >1.0	44.7 D 0.94
121st/Walnut	>60.0 F >1.0	33.0 C 0.87
Greenburg/Oleson/Hall	>60.0 F >1.0	46.8 D 0.91
Greenburg/Washington Square Road	>60.0 F >1.0	51.4 D 0.92
Greenburg/Locust	43.6 D 1.0	29.9 C 0.91
Hall/Locust	32.7 C 0.86	25.5 C 0.79
Greenburg/ORE 217 WB Ramps	27.8 C 0.74	29.3 C 0.65

Intersection	**2015 Base**	**2015 Mitigated**
Signalized Intersections (future)	*Delay LOS V/C*	
Greenburg/ORE 217 EB Ramps	29.1 C 0.72	23.4 C 0.58
Greenburg/Tiedeman	53.1 D >1.0	39.6 D 0.96
Main/Greenburg/ORE 99W	60.4 E 0.96	51.3 D 0.88
Hall/Oak	56.2 E >1.0	33.4 C 0.88
Hall/ORE 99W	>60.0 F >1.0	54.7 D 0.95
ORE 217 NB Ramps/ORE 99W	28.8 C 0.95	18.0 B 0.79
ORE 217 SB Ramps/ORE 99W	40.7 D 0.99	31.6 C 0.86
Main/Johnson/ORE 99W	23.1 C 0.80	16.4 B 0.75
Dartmouth/ORE 99W	>60.0 F >1.0	52.1 D 0.96
72nd/ORE 99W	41.7 D 0.88	53.8 D 0.92
68th/ORE 99W	>60.0 F >1.0	48.3 D 0.94
72nd/Dartmouth	>60.0 F >1.0	31.3 C 0.70
68th/Dartmouth	>60.0 F >1.0	21.4 C 0.72
72nd/Hampton	34.0 C 0.90	52.8 D 0.84
68th/Atlanta/Haines	29.9 D 0.92	16.5 B 0.61
Hall/Hunziker	>60.0 F >1.0	40.7 D 0.88
Hall/Burnham	19.6 B 0.75	21.0 C 0.65
ORE 217 SB Ramps/72nd/Varns	65.4 E 1.0	31.0 C 0.83
72nd/Bonita	>60.0 F >1.0	49.9 D 0.97
Hall/McDonald	47.0 D 0.99	36.1 D 0.93
Hall/Bonita	33.5 C 0.86	45.0 D 0.82
72nd/Carman	50.1 D 0.97	43.7 D 0.95
I-5 SB Ramps/Carman	>60.0 F >1.0	58.9 E 1.0
72nd/Upper Boones Ferry	51.4 D 1.0	49.8 D 0.97
72nd/Durham	20.6 C 0.75	9.0 A 0.50
I-5 NB Ramps/Carman	>60.0 F >1.0	47.1 D 0.91
Upper Boones Ferry/Durham	62.3 E >1.0	31.0 C 0.85
Upper Boones Ferry/Bridgeport	>60.0 E 1.0	31.9 C 0.79
Hall/Sattler/Ross	>60.0 F >1.0	27.4 C 0.85
Hall/Durham	>60.0 F >1.0	45.6 D 0.86
ORE 99W/Walnut	40.6 D 0.93	52.0 D 0.87
ORE 99W/Garrett	3.4 A 0.51	3.4 A 0.51
ORE 99W/Park	22.8 C 0.84	18.6 B 0.76
ORE 99W/Tigard Marketplace	18.5 B 0.57	18.5 B 0.57
ORE 99W/McDonald/Gaarde	>60.0 F >1.0	67.1 E 1.0
ORE 99W/Canterbury	16.9 B 0.83	15.4 B 0.76
ORE 99W/Bull Mountain	30.1 C 0.95	27.0 C 0.89
ORE 99W/Beef Bend	67.2 E >1.0	54.8 D 0.88
ORE 99W/Durham	>60.0 E >1.0	40.2 D 0.82
Tiedeman/Walnut	>60.0 F >1.0	24.0 C 0.90
Murray/Old Scholls Ferry	79.4 E >1.0	51.1 D 0.92
Barrows (W)/Scholls Ferry	8.7 B 0.73	9.1 B 0.70

Intersection	2015 Base	2015 Mitigated
Signalized Intersections (future)	*Delay LOS V/C*	
Beef Bend/Scholls Ferry	>60.0 F >1.0	40.2 D 0.96
Unsignalized Intersections		
Greenburg/Oak	A/C	A/C
Burnham/Main	A/C	A/E
97th Ave/McDonald	A/E	A/D
135th/Walnut		

Alternatives

To address these deficiencies, a series of alternatives and strategies were considered by the TSP Task Force. The range of strategies includes:

- **Do nothing:** This results in severe impacts to motor vehicle and transit circulation in Tigard with delays which would not be tolerable.

- **Assume that alternative modes can serve excess demand.** The TSP analysis assumed that alternative modes would be developed to their optimal levels. The order of magnitude of trips to be served in 2015 goes well beyond the capacity of the alternative mode systems by themselves, even at their optimal levels. Forecasted vehicle trips in the PM peak hour range from 40,000 to 50,000 in the future – transit would serve only about 3,000 to 5,000 person trips in Tigard.

- **Build all the road capacity necessary to achieve level of service D conditions at intersections.** This strategy would have significant impact on right-way-way for roads. Larger roads would be the result; that is contrary to the more livable, pedestrian friendly outcome expressed by the TSP Task Force.

- **Pragmatically add capacity to all modes, developing a balanced system.** Outline the long term configuration of streets to allow development to best accommodate future needs**.** The TSP Task Force chose to pursue this strategy. It involves significant system improvements, but is the only alternative that balances performance between modes, consistent with regional policy**.**

With the chosen strategy, there were numerous alternatives explored in developing the balanced system. Street improvements are required throughout Tigard in the next twenty years. Working with the top three priorities of the TSP Task Force, alternatives were considered in each of the following:

1. Regional Circulation Enhancements
2. Connectivity/Circulation Improvements within Tigard
3. Traffic Operational Improvements

Regional Circulation Enhancements

Through the travel forecasting efforts, tests were conducted of a variety of motor vehicle improvements. Within Tigard, the most significant changes in future traffic volume resulted from

improvements to regional highways. Because Tigard is located at the junction of two major urban freeways and is bifurcated by ORE 99W, its arterial street system (which is very limited – not a traditional grid) is impacted by the performance of these regional facilities. Today, incidents on I-5 or ORE 217 send traffic cascading through Tigard, snarling local circulation that has few options. Future solutions could focus on regional highways alone – however, this TSP takes an integrated approach to regional, city circulation and traffic operational improvements. Therefore, while the following regional improvements are substantial – they are part of an overall package of improvements needed to balance future circulation needs. The following four sections outline problems identified in the future forecasts and possible solutions for ORE 217, traffic between ORE 99W and I-5, I-5 and ORE 99W.

1. ORE 217 is Overcapacity. Many prior adopted plans have identified the need for additional capacity on ORE 217 (RTP, Western Bypass Study, Washington County Transportation Plan, Beaverton TSP). Recent studies by ODOT[18] indicate additional corridor capacity can accommodate 20 year demand and that various alternatives are possible (ranging from general purpose lanes to high occupancy vehicle lanes to high occupancy toll lanes to a transitway to off-system improvements). Further analysis in the ORE 217 Corridor Study will lead to a preferred alternative for this corridor. Tigard is substantially impacted by the lack of additional capacity on ORE 217 (routes such as Scholls Ferry Road, Hall Boulevard, ORE 99W, Greenburg Road and Walnut Street all will operate over capacity without ORE 217 improvements). An improvement to ORE 217 is critical to maintaining adequate circulation capacity in Tigard. However, the improvements to ORE 217 are of regional significance and the City should work together with other agencies to define the most appropriate corridor enhancement. ***For this TSP, a space holder project of widening ORE 217 by one lane each way is identified (similar to other approved plans noted above) until the Corridor Study gains consensus on the preferred ORE 217 alternative.***

2. Tigard continues to serve growing cut-through traffic on ORE 99W. Future forecasts for ORE 99W show it is well over capacity in future demand. A significant share of traffic is regional in nature and cuts through Tigard. This demand (Sherwood/Yamhill County/Oregon Coast) has limited other alternative routes. Prior studies in the Washington County Transportation Plan called for a Western Bypass connecting I-5 with ORE 99W and further to the north toward Hillsboro. This connection has been studied in the Western Bypass Corridor Study conducted by ODOT in the early 1990's. There are few alternatives to serving this regional traffic. Therefore tests were conducted of two regional options to determine their impact on Tigard streets. The first is a connection between I-5 and ORE 99W. ODOT continues to evaluate this connection. While helpful in reducing cut through traffic on ORE 99W in Tigard (a few hundred vehicles in the peak hour), its benefit to Tigard traffic operation is minimal. ORE 99W still fails with or without the I-5/ORE 99W connector. The greatest benefits of the I-5/ORE 99W connector are east-west streets in Tualatin. Even Durham Road benefits from the I-5/ORE 99W connector***. While by itself the benefits are not large in Tigard, the I-5/ORE 99W contributes to mitigating ORE 99W and should be supported by Tigard as a helpful regional improvement.***

The northern portion of the Western Bypass was also investigated as to its benefits to Tigard circulation. In testing this connection with the regional model, there was little if any benefit of

[18] ORE 217 Corridor Study Initial Improvement Concepts Draft, ODOT, February 2000.

northerly connections north of Scholls Ferry Road. While traffic is attracted to the new route, it creates significant impact on streets such as Scholls Ferry Road (creates balanced peak flows rather than directional flows resulting in capacity failures). Additionally, routes such as ORE 99W which are in the most need of benefits from such a facility sees less than 100 vehicles per hour benefit. ORE 99W gains as much mitigation benefit from an enhanced Beef Bend/Elsner Road arterial as it does from any "Western Bypass". ***Therefore, this analysis finds little or no operational benefit to Tigard from a Western Bypass.***

3. I-5 fails south of ORE 217 impacting Tigard streets at peak times. The modified 2015 travel forecasts show congestion on I-5 south from ORE 217 to I-205 and Wilsonville. The lack of capacity on I-5 results in diversion onto Tigard surface streets (and as with ORE 217, the limited circulation network breaks down). Without I-5 improvements, it is unlikely that the southeastern portion of Tigard will be without extensive congestion in peak periods. Unlike improvements to ORE 217 (which have been adopted in various plans) there is little regional recognition of the I-5 south corridor deficiencies and need for improvements. No amount of ramp metering or freeway management can avoid this deficiency. Based upon the modified 2015 forecasts, the addition of one lane each direction (including ramp braids between ORE 217 and Carman Drive, retaining auxiliary lanes from Carman Drive to Lake Oswego/Durham exit) is necessary to reduce impact of several hundred peak hour vehicles on Tigard surface streets. As with ORE 217, this improvement is of regional significance and Tigard should work with affected agencies in determining the most appropriate corridor improvements. There is a strong relationship between the ORE 217 needs and I-5 needs and any corridor improvement to one corridor should consider the other**. For this TSP, a space holder of additional person carrying capacity on I-5 south of ORE 217 to I-205 is identified until appropriate corridor studies can determine the preferred solution for both I-5 and ORE 217.**

4. ORE 99W fails in the future without improvement. Of all the regional transportation issues in Tigard, ORE 99W is probably the closest to a "rubik's cube". Tigard depends heavily on ORE 99W as its primary arterial. There are no parallel routes to ORE 99W and its diagonal alignment and the physical features of Tigard make using ORE 99W essential for also any trip in Tigard. ORE 99W's statewide status and linkage to Yamhill County and the Oregon Coast have similar issues – the only route servicing northeast-southwest travel. The future demand for this corridor is well beyond its five lane capacity without system-wide improvements. Ten various alternatives to improving ORE 99W were investigated, ranging from the no improvement to radical capacity improvements. Table 8-5 summarizes the wide range of alternatives. Unfortunately, no one improvement results in desirable (better than level of service F) operation. The most significant finding was that no matter whether ORE 99W was widened southwest of Greenburg Road, the end result was failure. Added capacity on ORE 99W (tested by modeling seven lanes) resulted in significantly higher turning movements on/off ORE 99W and large through movements on ORE 99W. The end result was that not only would you have to widen to seven lanes but at nearly every intersection additional turning lanes were needed (double lefts, right turn) creating nearly a 10 lane cross section at intersection. And even after that the end result was level of service F conditions. Therefore the recommended approach combines several elements to produce a minimally acceptable operating condition. ***The TSP recommends: 1) widening ORE 99W to seven lanes between I-5 and Greenburg Road; 2) retaining the five lane cross section southwest of Greenburg Road; 3) extensive intersection improvements – turning lanes; 4) access management; 5) improvements to ORE 217 and I-5 noted above; 6) off-system***

improvements such as freeway improvements and arterials such as Walnut extension; and 7) consideration of a western/Yamhill County commuter rail corridor.

Table 8-5
ORE 99W Alternatives Evaluation

Alternative	Key Elements	Findings
Retain ORE 99W as 5 lanes	No improvement	Level of Service F operation in 20 years; extensive congestion beyond existing levels
Widen to 7 lanes I-5 to Greenburg **Retain 5 lanes west of Greenburg**	Widening of ORE 99W in key segment between I-5 and ORE 217	Resolves many of the Tigard Triangle operational problems, requires off-system improvements and access management to work at Level of Service E, significant business impact
Widen ORE 99W to seven lanes	Complete corridor widening Requires extensive intersection improvement (multi-turn lane)	Attracts significant traffic from arterials that can be made to work in future – added ORE 99W traffic is nearly unmitigatable at intersections due to heavy through traffic and conflicts with turning vehicles – results in LOS F conditions after widening, substantial business impact
Retain 5 lane ORE 99W, use other regional routes to mitigate	Widening of ORE 217, I-5 and a new ORE 99W to I-5 Connector	Helps ORE 99W significantly (several hundred vph) but segment between I-5 and Greenburg (Tigard Triangle area) remains at LOS F
Retain 5 lane ORE 99W, widen Hall/McDonald/Bonita/Durham	Other Tigard arterials widened to five lanes to improve other arterials	Does not resolve Tigard Triangle area, major residential impacts of multiple arterial widening, other arterials can get by with three lanes
Build a viaduct above ORE 99W from I-5 to southwest of Durham	Provide ramps only at the ends and at ORE 217	Pulls substantial (30 to 60%) portion of traffic off ORE 99W, a few local intersections still operate poorly, very expensive (~$300,000,000)
Implement Access Management	Closes driveways, limits access points to 1,000 feet	Improves capacity 25-35%, substantial business impact, difficult to implement – could take 50 years to fully implement – minor capacity gain with phased or limited implementation – level of service is still a problem
Build a bypass around ORE 99W in Tigard	New roadway near Beef Bend/Elsner linking to Scholls Ferry Road and heading further north	Does not substantially reduce traffic on ORE 99W, LOS F remains
Fronting Roadways along ORE 99W	Build entirely new fronting roadway either adjacent to ORE 99W or behind fronting land uses	Substantial land use impact, traffic benefit is marginal on the whole but good benefits in selected locations, LOS still F, could consider better connectivity between I-5 and ORE 217
Commuter Rail to the west serving Sherwood, Newberg,	Would require large park and ride lots, could consider bus alternative	May be useful in twenty years to reduce ORE 99W potential demand by 400 to

Alternative	Key Elements	Findings
Yamhill County, Spirit Mountain and the coast	however, congestion on ORE 99W would result in slower operation	800 vehicles per hour – by itself not enough to mitigate problems on ORE 99W but helps reduce through traffic

Connectivity/Circulation Improvements in Tigard

Several alternative connections were explored throughout Tigard to address future deficiencies. While improvements were considered in many locations, there were four primary areas where future problems are significant:

- Washington Square Area
- Tigard Triangle Area
- Western Tigard capacacity
- East-West Circulation Capacity
    1. Durham Road area
    2. North of Durham

Washington Square Area. The Washington Square Regional Center Plan has recently been completed and will be adopted by City Council. It outlines many of the transportation alternatives for this area. There are three significant improvements that have been identified for the regional center area:

- **Overcrossings of ORE 217.** To relieve the over-capacity ORE 217 interchanges near Washington Square, two new overcrossings are identified for the next 20 years. The first is between Greenburg and Scholls Ferry Road, linking Washington Square Road over the top of ORE 217 connecting Locust with Nimbus Avenue. This overcrossing is highly effective in reducing traffic at ORE 217/Scholls Ferry Road (about 10,000 to 20,000 vehicles per day). The linkage to Nimbus is critical in mitigating problems at the Scholls Ferry interchange. ODOT has evaluated this overcrossing for its potential to serve drop-in ramps to any high occupancy toll lane scenario on ORE 217. The second overcrossing is an extension of the Washington Square Road near Scholls Ferry, over ORE 217 to access Cascade Avenue (potentially Nimbus Avenue also). This linkage may become necessary with the widening of ORE 217 and the close proximity of the Scholls Ferry/Cascade intersection to ORE 217. Widening of ORE 217 may require the closure of the Scholls Ferry/Cascade intersection and this new overcrossing would be a replacement to that lost access. The southern overcrossing should be viewed as the higher priority of the two overcrossings since it carries more traffic (the southerly crossing has 5,000 to 10,000 vehicles per day).

- **Scholls Ferry Road widened to seven lanes**. Future traffic in the regional center area results in level of service F conditions without additional lanes on Scholls Ferry Road. Even with new overcrossings, Scholls Ferry fails in 20

years. Because widening Scholls Ferry Road is a complex right-of-way task, the overcrossings of ORE 217 should be implemented first before full widening of Scholls Ferry Road. The timing of ORE 217 improvements will also affect the timing of the seven lane improvement. Based upon capacity analysis for the future years, the seven lane widening should extend to Barrows Road/Davies Road. Right of way for seven lanes should be preserved in this corridor to Murray Boulevard to address potential future Town Center and other future growth potential needs possibly within or outside the 20 year planning horizon. An alternative to be considered in this projects development would be a viaduct from ORE 217 west over the railroad tracks forming an expressway for approximately a half mile from Hall to west of Nimbus.

- **Greenburg Road widening**. The eastern face of Washington Square will require reevaluation of access to the center. Widening of Greenburg Road to two lanes each way north of Locust past the cemetery will require extensive right-of-way acquisition. The four lanes are needed to avoid level of service F conditions on Greenburg at Locust and Hall. The segment adjacent to the cemetery could be four lanes with no access and no left turn lanes to minimize right of way taking.

- **Other roadway connections**. Three other roadway connections were considered in the Washington Square area. Two were recommended in the Regional Center Plan. While these roadway connections have some benefit to capacity in the area, but these linkages are significant in improving circulation in the Washington Square area. The first connection is the extension of Nimbus Avenue south to Greenburg Road. This linkage attracts 9,000 to 15,000 vehicles per day (in the future with ramp metering). It is very helpful in reducing short trips on ORE 217 and minimizing impacts to streets such as 121st Avenue. Wetland and railroad constraints require further investigation as to the feasibility of this linkage. The second was a collector roadway linking Locust Street to Oak Street east of Greenburg Road. This linkage serves between 5,000 and 10,000 vehicles per day, reducing the burden of local trips on Greenburg Road. Both of these connections were recommended in the Washington Square Regional Center Plan. The third connection studied was a link from Pfaffle Street with Oak Street and Lincoln Street, paralleling ORE 217. This linkage was rejected in the Washington Square Regional Center Plan study. While helpful in relieving Hall Boulevard, the impacts were found to be greater than the benefits in that study. The outcome of not selecting this connector is that Hall Boulevard must have right-of-way set aside for a five lane roadway.

Tigard Triangle Area. This subarea is also subject of a recently adopted plan. The basic package of street improvements needed to mitigate level of service F conditions in this area include:

- ORE 99W seven lanes
- Dartmouth Street five lanes
- 72nd Avenue five lanes
- Atlanta Street extended from Haines Street to 72nd Avenue
- Backage roads to ORE 99W (providing access to business but not directly on ORE 99W)

- Reconstructed ORE 217/72nd Avenue interchange utilizing 68th Parkway for northbound ORE 217 access (closing the existing substandard northbound 72nd ramps).
- A Hunziker to Hamption overcrossing of ORE 217

Other options considered in this sub area included a Dartmouth to Hunziker overcrossing of ORE 217, an extension of Atlanta Street to Dartmouth Street and five lanes on ORE 99W. The following summarizes the findings of these options:

Dartmouth to Hunziker ORE 217 Overcrossing	Attracts less than 5,000 vehicles per day by itself; extend Walnut to link up with the overcrossing of ORE 217 and the volume increase to 8,000 per day. Implement complete ramp metering in the Tigard Triangle area (on ORE 217 and I-5) and the volume increases to 13,000 vehicles per day. Most of the traffic benefits of the overcrossing are produced with the Hunziker to Hampton overcrossing and the Dartmouth to Hunziker overcrossing has limited additional benefit. Unfortunately, ORE 99W still requires mitigation with or without overcrossing; access to ORE 217 would not be allowed by ODOT due to substandard spacing resulting in unsafe operation at large expense. One option where this overcrossing may be desirable in the future would be where ramp metering is fully operational and improvements to ORE 217 include a High Occupancy Toll (HOT) or High Occupancy Vehicle (HOV) lane alternative where direct connections to ORE 99W are desired. The Dartmouth to Hunziker overcrossing could provide access to the Tigard Triangle and ORE 99W area via drop in ramps. Therefore, a potential alignment should be preserved for future consideration (where the alignment would go through parking lots). However, the overcrossing is not part of the street improvement plan in the TSP.
Atlanta Extension to Dartmouth	While the Atlanta extension to 72nd is 10,000 to 15,000 vehicles per day the segment to the south connecting to Dartmouth is well below that level. Recent development has blocked an optimal alignment. Backage roads will be more effective in this setting. The TSP includes the Atlanta extension to 72nd and backage roads with redevelopment.
Five lane ORE 99W	Level of service F conditions result in Tigard Triangle without 7 lanes. This option would limit the potential of the Tigard Triangle to serve the projected land use in the future. There were no subarea alternatives that precluded the need for 7 lanes between I-5 and 217.

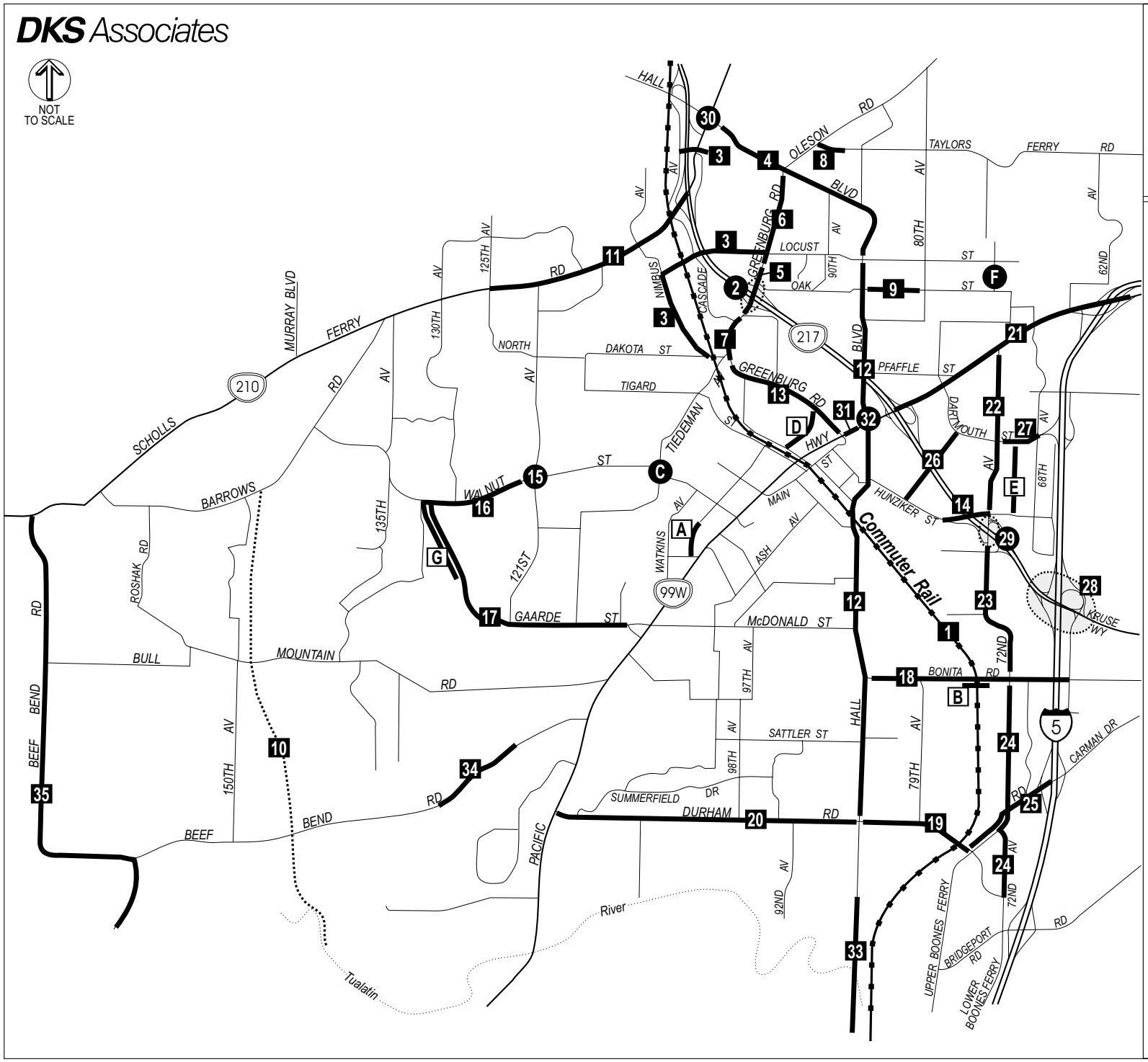
Western Tigard Capacity. Future growth in western Tigard results in the need for improved north-south and east-west capacity. Today most of the western Tigard land is vacant or under utilized. While Beef Bend Road serves this area adequately today, future land use growth will generate demand for over 10,000 vehicles per day. For Beef Bend to operate satisfactory in the future with two to three lanes, access must be limited to maximize the operating capacity of the only north/south and east/west linkage in the western end of Tigard. With 1,000 foot spacing the capacity of Beef Bend Road can be preserved at 1,200 to 1,500 vehicles per hour per lane. With current access spacing the capacity of Beef Bend Road would drop to 700 to 900 vehicles per hour per lane. Because of its rural stature today and under developed frontage, there is potential to avoid similar mistakes made on other arterial routes (such as ORE 99W or Greenburg Road) where frequent driveways rob the potential capacity of the roadway. Access from local streets not Beef Bend, consolidation of driveways and the use of medians should all be implemented on Beef Bend. Without this treatment, Bull Mountain

Road will carry the additional load and the lost capacity from frequent driveways will virtually require another new roadway to service the same traffic. Similar consideration should be given to 150th Avenue. Spacing of access points every 600 feet should be considered on 150th.

East-west Circulation Capacity. Future demand for east-west travel on Tigard's east side will result in level of service F conditions. Two options were evaluated to address this future deficiency. First widening Bonita and McDonald to five lanes was considered. Because Bonita does not connect to the I-5 freeway ramps (Carman does), there is limited benefit achieve by five laning the McDonald-Bonita corridor. Both Carman and Durham remain at LOS F. A second option was considered by widening Carman Drive at I-5 to five lanes and connecting it directly to Durham Road. This option eliminates the level of service F conditions and provided safer operation for the majority of vehicular traffic. The heavy traffic on Durham Road is prevalent from Carman Drive to Hall Boulevard. Traffic on Durham drops sharply west of Hall and can be handled by a three lane cross section. Right-of-way in the Durham corridor should be preserved for a five lane roadway, even though this TSP calls for three lanes west of Hall Boulevard. The impacts of the Carman to Durham option are less than the Bonita/McDonald option for the following reasons: 1) level of service is adequate with Carman/Durham and not with Bonita/McDonald resulting in unsafe operating conditions; 2) Carman/Durham accesses I-5; 3) even with three lanes Durham is carrying high traffic volume east of Hall (15,000 to 20,000 vehicle per day). The impacts of street improvements to Carman/Durham can be minimized through design (medians, landscaping). Other alternatives to serve future east-west demand are precluded due to the railroad , wetlands, river and being too far north or south to serve the projected demand.

Traffic Operational Improvements

A series of intersection improvements were identified which primarily add turning movement capacity. These roadway improvements typically consist of left and right turn lanes and/or traffic signals. Nine of the study intersections require significant improvements. Most of these intersection improvements are complementary to the regional improvements and connectivity enhancement noted above.



CITY OF TIGARD

Transportation Systems Plan

Legend

- 32 - Intersection Improvement
- Interchange Improvement
- Street Improvement
- 22 - RTP Project List
- D - City of Tigard CIP
- Proposed Off Street Path

Figure 8-18
RTP AND CIP PLANNED IMPROVEMENTS

Table 8-6
Proposed 20 Year Metro and Planned CIP Projects

Table 8-6				
Project No.	**Project Name (Facility)**	**Project Location**	**Project Description**	**Estimated Project Cost**
Regional Transportation Plan, August 2000				
1	Beaverton-Wilsonville Commuter Rail	Wilsonville to Beaverton	Constructs peak-hour service only with 30-minute frequency	$75,000,000
2	Highway 217 Ramp Improvements - Greenburg	Greenburg Road and Highway 217	Widen Greenburg off-ramps; install ramp meter to Highway 217	$ 12,000,000
3	Highway 217 Overcrossings & Connections	Washington Square Area	Cascade Plaza to Washington Square OC Locust to Nimbus OC Nimbus to Greenburg connector	$25,000,000 $15,000,000 $15,000,000
4	Hall Boulevard Improvements	Scholls to Locust	Widen to 5 lanes with boulevard design	$ 4,700,000
5	Greenburg Road Improvements	WashingtonSquare Road to Shady Lane	Widen to 5 lanes with boulevard design; NB Highway 217 off-ramp improvement	$ 2,500,000
6	Greenburg Road Improvements, North	Hall Boulevard to Washington Square Road	Widen to five lanes with bikeways and sidewalks	$ 2,500,000
7	Greenburg Road Improvements, South	Shady Lane to N. Dakota	Widen to five lanes with bikeways and sidewalks	$ 2,000,000
8	Taylors Ferry Road Extension	Washington Drive to Oleson Road	Three lane extension with bikeway and sidewalks	$ 1,900,000
9	Oak Street Improvements	Hall Boulevard to 80th Avenue	Signal improvement, bikeway and sidewalks	$ 800,000
10	Powerline Trail Corridor	Farmington Road to Lower Tualatin Greenway	Plan, design and construct multi-use path	n/a
11	Scholls Ferry Road Improvements	Highway 217 to 125th Avenue	Widen to seven lanes with access management	$ 15,760,000
12	Hall Boulevard Improvements	Locust to Durham Road	Improve Hall Boulevard to 5 lanes	$ 4,700,000
13	Greenburg Road Improvements	Tiedeman Road to 99W	Widen to 5 lanes	$ 4,800,000
14	Highway 217 Overcrossing - Tigard	Hunziker Street to 72nd at Hampton	Construct new two-lane crossing of Highway 217	$ 4,000,000
15	Walnut Street Improvements, Phase 1	at 121st Avenue	Install traffic signal at 121st Avenue	$ 1,750,000
16	Walnut Street Improvements, Phase 3	Gaarde Street to 121st Avenue	Widen to three lanes with bikeways and sidewalks	$ 5,720,000
17	Gaarde Street Improvements	110th Avenue to Walnut Street	Widen to three lanes with bikeways and sidewalks	$ 4,000,000
18	Bonita Road Improvements	Hall Boulevard to Bangy Road	Widen to four lanes	$ 8,000,000
19	Durham Road Improvements	Upper Boones Ferry Road to Hall Boulevard	Widen to five lanes	$ 3,500,000

Table 8-6				
Project No.	**Project Name (Facility)**	**Project Location**	**Project Description**	**Estimated Project Cost**
20	Durham Road Improvements	Hall Boulevard to 99W	Widen to two lanes westbound, 1 lane eastbound, turn lane, bikeways and sidewalks	$ 5,000,000
21	99W Improvements	I-5 to Highway 217	Widen to seven lanes	$ 25,000,000
22	72nd Avenue Improvements	99W to Hunziker Road	Widen to five lanes	$ 3,000,000
23	72nd Avenue Improvements	Hunziker Road to Bonita Road	Widen to five lanes	$ 5,000,000
24	72nd Avenue Improvements	Bonita Road to Durham Road	Widen to five lanes with bikeways and sidewalks	$ 5,000,000
25	Upper Boones Ferry Road	I-5 to Durham Road	Widen to five lanes	$ 3,000,000
26	Dartmouth Street Extension	Dartmouth Road to Hunziker Road	Three lane extension; new Highway 217 overcrossing	$ 28,000,000
27	Dartmouth Street Improvements	72nd Avenue to 68th Avenue	Widen to four lanes with turn lanes	$ 500,000
28	I-5/ORE 217 Improvements	I-5/ORE 217 Interchange	Interchange Modernization Phases 2 & 3	$ 54,000,000
29	Highway 217/72nd Avenue Interchange Improvements	Highway 217 and 72nd Avenue	Complete interchange reconstruction with additional ramps and overcrossings	$ 15,000,000
30	Scholls Ferry Road Intersection Improvement	At Hall Boulevard	Add SB right turn lane from SB Hall Boulevard	$ 500,000
31	Highway 99W Bikeway	Hall Boulevard to Greenburg Road	Retrofit for bike lanes	$ 500,000
32	Highway 99W/Hall Boulevard Intersection Improvements	99W/Hall Boulevard	Add turn signals and modify signal	$ 3,700,000
33	Hall Boulevard Extension	Extension from Durham to Tualatin Road	Extend Hall Boulevard to connect across the Tualatin River	$ 25,000,000
34	Beef Bend Road	King Arthur to 131st	Widen to three lanes	$5,000,000
35	Beef Bend/Elsner	ORE 99W to Scholls Ferry	Widen to three lanes	$24,000,000
	Subtotal		**RTP Group**	**$410,830,000**
Tigard CIP Projects (FY 1999-2000 CIP, Includes Projects through 2001-2002)				
A	Grant Avenue Pedestrian Improvements	Park Street to School Street to Charles F. Tigard Elementary School	Provide a pedestrian path along Grant Avenue connecting the existing walkway to Charles F. Tigard Elementary School	$ 47,000

Table 8-6				
Project No.	**Project Name (Facility)**	**Project Location**	**Project Description**	**Estimated Project Cost**
B	Bonita Road Improvements (completed)	Railroad Tracks to Fanno Creek	Underground utilities, reconstruction of railroad crossings, street widening	$ 386,000
C	Walnut/Tiedeman Realignment (completed)	Walnut Street/Tiedeman Avenue	Intersection realignment and signalization	$1,300,000
D	Lincoln Street Improvements	Between Greenburg Road and Commercial Street	Construct half-street improvements, including sidewalks, curbs and streetlights	$ 190,000
E	69th Avenue LID	Between Hampton Street and Dartmouth Street, also includes Beveland Street from 68th Avenue to 70th Avenue	Construct 69th Avenue to ultimate section in compliance with Tigard Triangle Design Standards	$ 1,600,000
F	Mapleleaf/71st Avenue	from 72nd Avenue to Oak Street	Widens existing pavement on 71st Avenue and Mapleleaf Street to the standard width of a local street	$ 650,000
G	Gaarde Street Extension (completed)	Quail Hollow to Walnut	Construct street to ultimate section (Cost is for design & ROW only)	$ 50,000
	Subtotal		**City CIP Group**	**$ 4,223,000**
	Total			**$ 415,053,000**

Recommended Improvements

The improvements needed to mitigate modified 2015 future conditions combine both those identified in prior plans (Figure 8-18 and Table 8-6) and those determined as the outcome of the TSP transportation analysis. The improvements shown in Figure 8-18 are part of the updated RTP listing for the Tigard area which is in process of approval (planned summer 2000). Also shown on Table 8-6 is a listing of the City of Tigard Capital Improvement Program projects through 2002. Of all the improvements identified in the TSP analysis, only three projects were not included in the TSP improvements. Each of these three improvements may be necessary within or after the 20 year time frame of the TSP. The forecasts for the TSP did not indicate they were necessary with the modified 2015 forecast. Right-of-way should be preserved for each of these projects for future consideration.

- Bonita Road widening to four lanes from Hall to Bangy (preserve right-of-way)
- Durham Road widening west of Hall Boulevard (preserve right-of-way)
- Dartmouth to Hunziker overcrossing of ORE 217 (retain an alignment for future ORE 217 HOT/HOV options)

Of all the TSP recommended improvements most projects have been discussed for several years. There is one significant project (the extension of Walnut) that is different than prior plans. Circulation and capacity deficiencies along ORE 99W and Tigard Triangle required more than spot intersection improvements or roadway widening to mitigate future growth impacts. The ability to circulate in Tigard from northwest to east is severely limited except for ORE 99W. There are few options to accommodate additional circulation. One option was to realign Greenburg Road to Johnson Street. Another was to extend Walnut Street west of ORE 99W. The Greenberg Road realignment did little to improve capacity. The Walnut extension helped resolve problems in the ORE 99W area near Hall/Greenburg and in the Tigard Triangle area on ORE 99W. The specific alignment of this improvement would need to be detailed in project development. However, three alignments were initially investigated. First an alignment from ORE 99W/Walnut northeasterly over Fanno Creek to the Ash Street right-of-way running north to intersect with Scoffins/Hunziker. This allowed traffic to proceed on Hunziker east to Tigard Triangle over the recommended overcrossing to 72nd/Hampton. It would also serve as direct access to the proposed commuter rail station area. Other alignment options that should be explored would be connecting to Burnham/Hall and continuing northward to Hunziker to a likely location for the conceptual overcrossing of ORE 217 from Dartmouth (not part of this TSP – more than 20 years in the future). A third alignment would utilize City Hall right-of-way and align similar to the second option with Hunziker. More detailed study of the alignment will be part of the future project development.

A key issue in determining need was the level of service calculation. The 1997 Highway Capacity Methodology for the peak hour was utilized. ODOT and Metro have recently adopted two hour level of service. To approximate this measure, the volume-to-capacity ratios in Table 8-4 can be multiplied by a ratio of the average of the two hour volume divided by the peak hour volume. This ratio ranges from 0.93 to 0.97 at intersections in Tigard in 1999. Very few improvements would change under this assessment of capacity. Nearly all the improvements needed in the peak hour would also be necessary in the two hour.

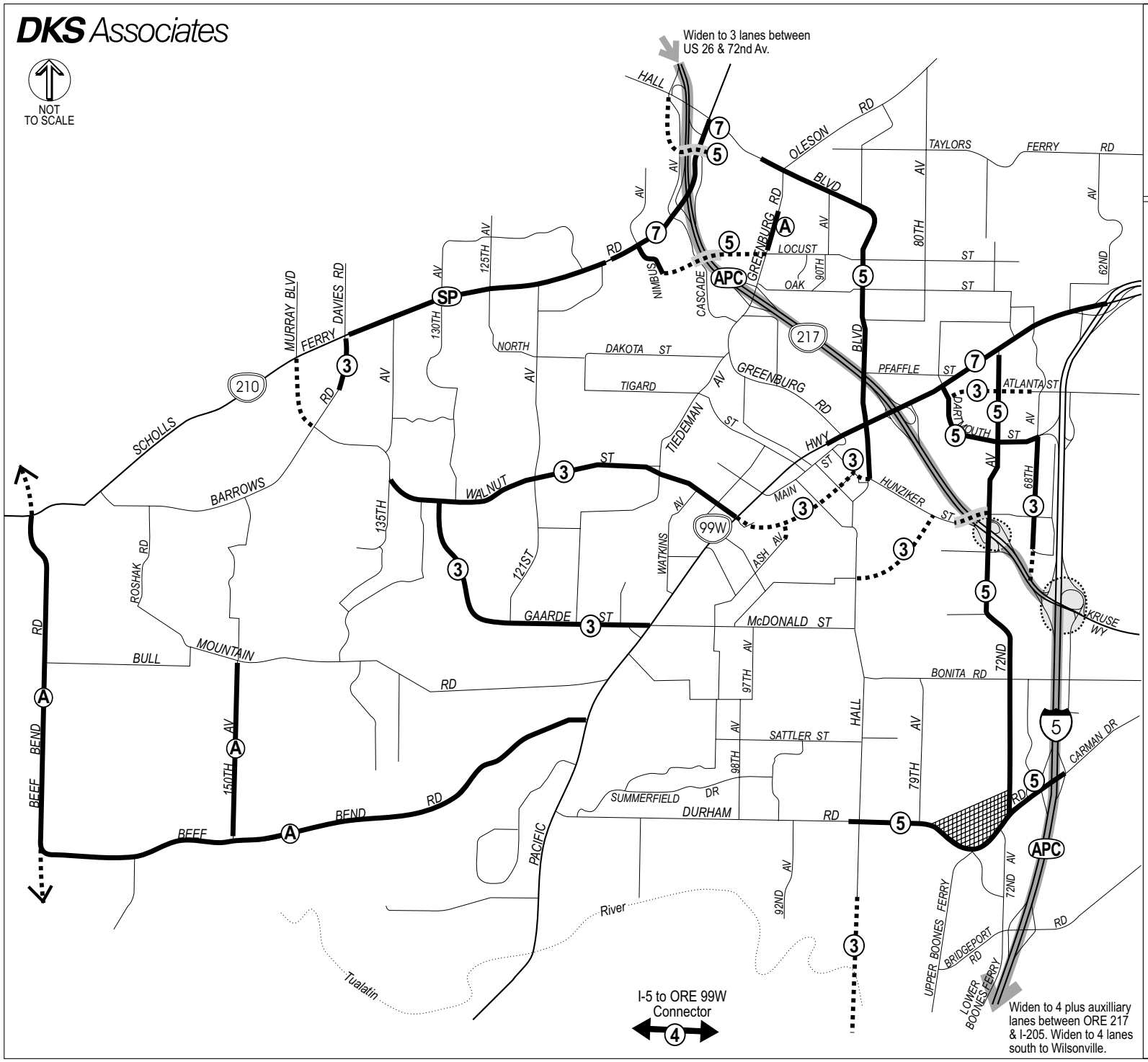
The recommended TSP motor vehicle improvements are summarized in Table 8-7 and Figure 8-19. Several spot improvements were also identified at various intersection in Tigard and they are summarized in Figure 8-20 and Table 8-8. Prioritization should occur in coordination with the CIP Figure 8-18 Street Improvement Plan process. All improvements on arterials and collectors shall include sidewalks, bike lanes and transit facilities. These improvement lists should be used as a starting point for inclusion in regional funding programs for streets.

Table 8-7
Future Street Improvements
(All Projects include sidewalks, bicycle lanes and transit accommodations as required)

Location	Description	Funding Status*
I-5	Widen to 4 plus auxiliary lanes (each direction) between ORE 217 and I-205/Wilsonville Widen to 4 lanes (each direction) south to Wilsonville	Not Funded Not in any plan
ORE 217	Widen to 3 lanes plus auxiliary lanes (each direction) between US 26 and 72nd Avenue New ORE 217/I-5 interchange between 72nd Avenue and Bangy Road	Not Funded In RTP (as widening or HOV or HOT) Phase I Funded Phase II in RTP
ORE 99W	Widen to 7 lanes (total—both directions) between I-5 and Greenburg Road	In RTP
I-5 to ORE 99W Connector	Connector linking I-5 and ORE 99W (model assumed connector would be located north of Sherwood—specific location to be determined by further study)	In RTP
Overcrossings over ORE 217	5 lane overcrossings linking Washington Square and Cascade Avenue—one north of Scholls Ferry Road, one south of Scholls Ferry Road to Nimbus. The Washington Square Regional Center study also identifies linking Nimbus to Greenburg.	Not Funded (identified in Washington Square Regional Center Study & RTP)
Overcrossing of I-5	Widen Carman Drive interchange overcrossing to six lanes from four (two through lanes each way, side by side left turn lanes).	Not Funded In no Plans
Scholls Ferry Road	Widen to 7 lanes (total—both directions) between ORE 217 and Barrows Road (East). Preserve right-of-way for seven lanes to Murray Boulevard for future corridor needs.	Not Funded (widening to 125th identified in Wa.Co, Beaverton TSP & RTP)
Greenburg Road	Widen to 4 lanes adjacent to cemetary	Not funded In Wa.Co. Plan
Walnut Boulevard	Widen to 3 lanes (total—both directions) between 135th (or where Gaarde connects) to ORE 99W Extend Walnut east of ORE 99W to meet Hall Boulevard and Hunziker Street (3 lanes—total, both directions)	In RTP MSTIP for parts Not Funded In no plans
Gaarde Street	Widen to 3 lanes west of 121st to ORE 99W Use access control and 2 lanes in sensitive areas	In RTP

Location	Description	Funding Status*
Hall Boulevard	Extend south to Tualatin (3 lanes—total, both directions)	In RTP
Durham Road	Widen to 5 lanes (total, both directions) between Hall Boulevard and Upper Boones Ferry Road. Reserve right-of-way to the west for 5 lanes	In RTP
Durham Road/Upper Boones Ferry Road intersection	Realign intersection so that Durham Road continues on continous route to I-5/Carmen interchange—Upper Boones Ferry Road would "tee" into Durham Road/Upper Boones Ferry Road intersection	Not Funded In no plans
72nd Avenue	Widen to 5 lanes (total, both directions) between ORE 99W and south city limit at Upper Boones Ferry Road/Carman Drive/Durham Road	In RTP (could be partially funded by development in Tigard Triangle—ie. LID)
Hunziker/Hampton	Realign Hunziker Road to meet Hampton Road at 72nd Avenue—requires overcrossing over ORE 217—removes existing 72nd Avenue/Hunziker intersection	In RTP
Atlanta Street	Extend Atlanta Street west to meet 72nd Avenue	To be funded with development in Tigard Triangle (i.e. LID)
Dartmouth Street	Widen to five lanes from ORE 99W to I-5	In RTP, To be funded by fronting improvements
68th Avenue	Widen to 3-lanes between Dartmouth/I-5 Ramps and ORE 217 Extend 68th Avenue south to meet ORE 217 providing right-in/right-out only access to 68th Avenue from ORE 217, replacing the NB ramps to 72nd at ORE 217	Not Funded (could be partially funded by development in Tigard Triangle—ie. LID)
Scoffins/Hunziker/Hall intersection	Realign Scoffins to meet Hunziker at Hall	Not Funded
Hall Boulevard	Widen to 5 lanes between Washington Green and ORE 99W	In RTP
Beef Bend Road	Access Control should be implemented to preserve capacity with 2 lanes (with intersection turn lanes). Minimum 1,000 foot spacing should be used between any driveway(s) and/or public street(s) Widen from King Aruther to 131st to 3-lanes Widen Beef Bend/Elsner Road to 3-lanes from ORE 99W to Scholls Ferry Road	Not Funded Implemented with adjacent development In RTP MSTIP In RTP MSTIP

* - Refers to inclusion in prior plans such as Regional Transportation Plan (RTP), Major Streets Transportation Improvement Program (MSTIP), Washington County Transportation Plan, Beaverton TSP or other subarea plan. The RTP anticipates funding for projects within the plan in a 20 year horizon.



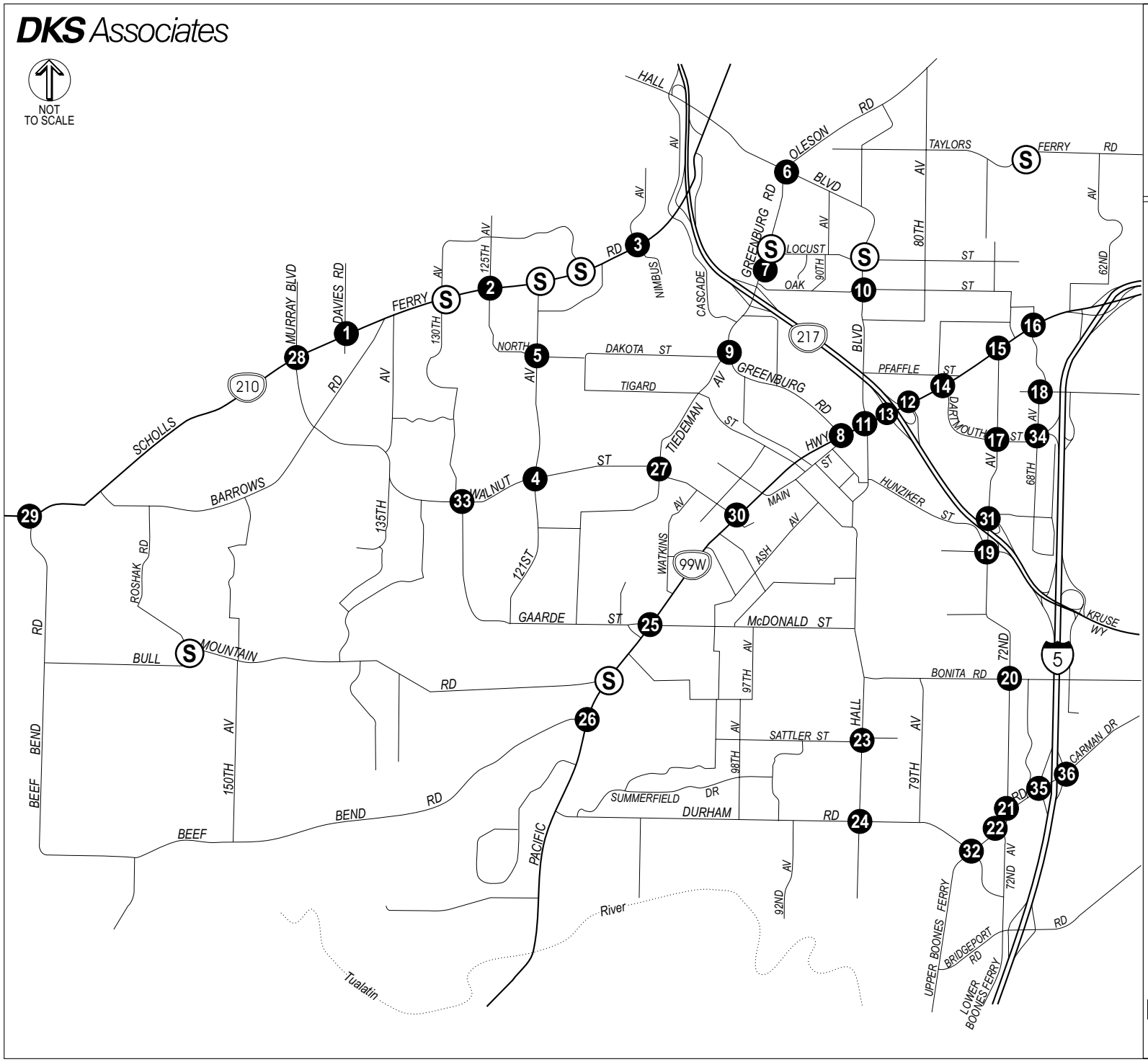
CITY OF TIGARD

Transportation Systems Plan

Legend

- (5) - Number of Lanes
- Freeway Widening
- Roadway Widening
- Proposed Roadway
- Proposed Overcrossing
- Interchange Improvement
- (A) - Access Control
- (APC) - Added Person Capacity
- (SP) - Preserve Right-of-Way for 7 Lanes
- Corridor Alignment Study Area

Figure 8-19
20 YEAR STREET IMPROVEMENT PLAN



CITY OF TIGARD

Transportation Systems Plan

Legend

00 - Intersection Improvement Location/Number

S - SPIS Safety Improvement Location

Note - Safety Improvements would also be done at same time intersection improvements are undertaken.

Figure 8-20
INTERSECTION IMPROVEMENT LOCATIONS

Table 8-8
City of Tigard Future Intersection Improvements

Table 8-8: Future Intersection Improvements		
No.	**Intersection**	**Description**
1	Davies/Scholls Ferry Road	• Traffic signal • Northbound right turn lane • Realign to meet Barrows Road, close Barrow to local traffic
2	North Dakota/125th/Scholls Ferry Road	• Southbound right turn lane • Retain westbound right turn lane when 3rd lane added on Scholls Ferry Road • Change from protected left turn phasing to permitted phasing north/south
3	Nimbus/Scholls Ferry Road	• Retain eastbound right turn lane when 3rd lane added on Scholls Ferry Road • Retain westbound right turn lane when 3rd lane added on Scholls Ferry Road • Southbound right turn lane • Reconfigure northbound and southbound lanes to create exclusive left turn lanes • Change from split phasing to protected left turn phasing north/south
4	121st/Walnut	• Traffic signal • Northbound left turn lane • Southbound left turn lane • Eastbound left turn lane • Westbound left turn lane
5	121st/North Dakota	• Traffic signal
6	Greenburg/Oleson/Hall	• 2nd northbound left turn lane • Extend signal cycle length • Assumes Hall widened to 5 lanes
7	Greenburg/Washington Square Road	• Southbound right turn lane • Overlap eastbound right turn • Extend signal cycle length
8	Main/Greenburg/ORE 99W	• Southbound left turn lane • Retain westbound right turn lane when ORE 99W widened to 7 lanes
9	Greenburg/Tiedeman	• Extend signal cycle length • Improved geometry/alignment
10	Hall/Oak	• Extend signal cycle length • Assumes Hall widened to 5 lanes
11	Hall/ORE 99W	• Southbound right turn lane • Northbound left turn lane • Westbound right turn overlap • Retain westbound right turn lane when ORE 99W widened to 7 lanes
12	ORE 217 NB Ramps/ORE 99W	• Retain eastbound right turn lane when ORE 99W widened to

Table 8-8: Future Intersection Improvements

No.	Intersection	Description
		7 lanes • Retain westbound right turn lane when ORE 99W widened to 7 lanes • 2nd northbound left turn lane
13	ORE 217 SB Ramps/ORE 99W	• 2nd southbound right turn lane • Retain eastbound right turn lane when ORE 99W widened to 7 lanes
14	Dartmouth/ORE 99W	• Retain eastbound right turn lane when ORE 99W widened to 7 lanes
15	72nd/ORE 99W	• Southbound right turn lane • Northbound right turn overlap • Change to protected left turn phasing north/south • Retain eastbound right turn lane when ORE 99W widened to 7 lanes
16	68th/ORE 99W	• 2nd westbound left turn lane • Northbound left turn lane • Southbound left turn lane • Change to protected left turn phasing north/south
17	72nd/Dartmouth	• Traffic signal • Assumes 72nd Avenue and Dartmouth widened to 5 lanes
18	68th/Atlanta/Haines	• Traffic signal
19	ORE 217 SB Ramps/72nd	• Assumes 72nd Avenue widened to 5 lanes
20	72nd/Bonita	• Assumes 72nd Avenue widened to 5 lanes
21	72nd/Carmen	• 2nd northbound right turn lane
22	72nd/Upper Boones Ferry Road	• Assumes Durham/Upper Boones Ferry/72nd widened to 5 lanes
23	Hall/Sattler/Ross	• Traffic signal • Northbound left turn lane • Southbound left turn lane
24	Hall/Durham	• 2nd southbound left turn lane • Widen west of intersection to introduce 5-lane section on Durham (include existing westbound right turn lane)
25	ORE 99W/McDonald/Gaarde	• Westbound right turn lane • 2nd Northbound left turn lane
26	ORE 99W/Beef Bend	• Southbound right turn lane (on ORE 99W) • Adjust cycle length
27	Tiedeman/Walnut	• Completed • Southbound left turn lane • Eastbound left turn lane • Westbound left turn lane
28	Murray/Scholls Ferry Road	• 2nd westbound right turn lane

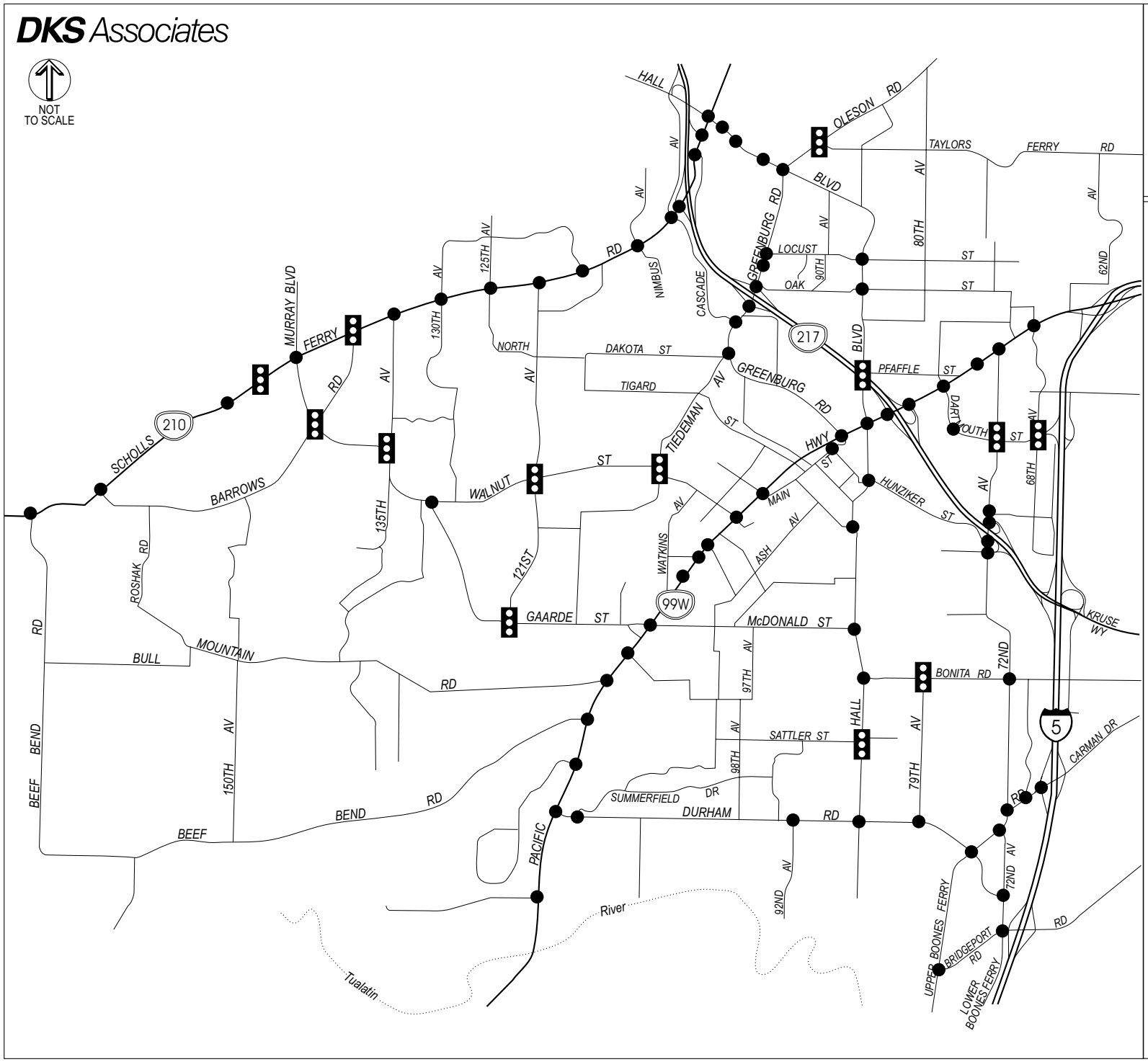
Table 8-8: Future Intersection Improvements

No.	Intersection	Description
		• Add additional southbound lane to achieve 2 southbound left turn lanes and two southbound through lanes • Extend signal cycle length • Changes to protected left turn phasing north/south and east/west
29	Beef Bend/Scholls Ferry Road	• Eastbound right turn lane • Northbound left turn lane • Eastbound right turn overlap • Change to protected phasing east/west • Change to split phasing north/south
30	Walnut/ORE 99W	• Retain westbound right turn lane when ORE 99W is widened to 7 lanes • Change to protected left turn phasing on Walnut
31	72nd/Hampton/Hunziker	• Southbound right turn lane OR eastbound right turn lane • Change to protected left turn phasing all directions
32	Durham/Upper Boones Ferry Road	• Reconfigure intersection to make through route between Durham and I-5/Carmen interchange
33	Gaarde/Walnut	• Traffic signal • Eastbound right turn lane
34	68th/Dartmouth	• Traffic signal
35	Carman/I-5 southbound	• Eastbound right turn lane
36	Carman/1-5 northbound	• 2nd westbound through lane • 2nd northbound left turn lane • Eastbound separate through and left turn (2) lanes
	Intersection Safety Enhancements	Evaluate improvements to reduce collisions at high SPIS intersections (refer to 1997-99 intersection list in Chapter 3)
	Pedestrian Crossing Evaluation/Signals	Study and determine appropriate locations for Pedestrian Crossing Signals

Traffic Signal Guidelines

Traffic signal warrant analyses were performed for all unsignalized study intersections operating at LOS E or worse under future base (2015) conditions (Table 8-9). Traffic signal warrants were based on the *Manual on Uniform Traffic Control Device*'s (MUTCD) Warrant 11 (Peak Hour Volume).[19]
To guide future implementation of traffic signals to locations which have the maximum public benefit by serving arterial/collector/neighborhood routes, a framework master plan of traffic signal locations was developed (Figure 8-21). The intent of this plan is to outline potential locations where future traffic

[19] *Manual on Uniform Traffic Control Devices for Streets and Highways*, Federal Highway Administration, 1988 Edition.



CITY OF TIGARD

Transportation Systems Plan

Legend

- Existing Signalized Intersection
- Potential Future Traffic Signal

Note: Signals may be needed at other sites if warranted. This map shows those locations that are most likely to be signalized consistent with TSP objectives.

Figure 8-21
TRAFFIC SIGNAL MASTER PLAN

signals would be placed to avoid conflicts with other development site oriented signal placement. To maintain the best opportunity for efficient traffic signal coordination on arterials, spacing of up to 1,000 feet should be considered. No traffic signal should be installed unless it meets *Manual of Uniform Traffic Control Devices* warrants. Three key traffic signal issues are outlined in this TSP as part of the transportation policy of Tigard:

- Establishing a traffic signal spacing standard of 1,000 feet and a traffic signal master plan to guide future traffic signal placements. When this standard is not met, additional evaluation should be prepared to assure signal progression can be efficiently maintained;
- Traffic signals disrupt traffic flow. Their placement is important for neighborhood access, pedestrian access and traffic control. To not utilize the limited placements of traffic signals to serve private land holdings will limit the potential for use that will generally benefit the public, neighborhoods and pedestrian access. Limiting placement of traffic signals to locations that are public streets would minimize or eliminate the potential for traffic signals solely serving private access.
- ODOT signal design and signal phasing guidelines should be followed for all traffic signal installations.

Table 8-9
Traffic Signal Warrants
MUTCD Peak Hour Volume Warrant

Intersection	Warrant Met?
72nd/Dartmouth	Yes
68th/Dartmouth	Yes
Gaarde/121st	Yes
Gaarde/Walnut	Yes
Walnut/121st	Yes
Walnut/Tiedeman	Yes
Sattler/Hall	Yes
Bonita/79th	Yes

SAFETY

Needs

Accident data was obtained for the City of Tigard from Washington County. Chapter 3 provides detailed data regarding motor vehicle accidents in Tigard. Several strategies are suggested for improving safety in the City of Tigard. These strategies aimed at providing the City with priorities that meet the goals and policies of the City.

- Work with other agencies such as Washington County and ODOT to help prioritize and fund safety programs - coordinated approach
- Develop a citywide safety priority system which identifies high accident locations, ranks the locations and identifies safety mitigation measures
- Address safety issues on an as needed basis

Suggested Improvements

Most of these high accident locations are included in future street improvements listed in Tables 8-6 and 8-7. The only two intersection not being improved are the two on Locust Street (at 72nd and 80th). Accident numbers over three years at these all-way stop sign controlled intersections are very low (3-4 in 3 years). Beyond maintenance, signing and lighting there is little else necessary at these two locations. In the short term, specific action plans should be prepared to address whether beneficial improvements at these locations can be made without affecting future plans.

A future issue with regard to safety involves the decision to go to three lanes from two lanes or five lanes from four lanes. National research has clearly demonstrated the benefits of providing a turning lane when daily traffic volumes exceed 15,000 vehicles per day[20]. While widening the street can commonly be viewed as pedestrian unfriendly, the potential impact of not having a turning lane is that accident rates will increase substantially (11 to 35 percent) on two lane roads compared to three lane roads.

One safety action that can have an immediate impact is to condition all land use development projects that require access on city streets to maintain adequate sight distance. This should address all fixed or temporary objects (plants, poles, buildings, signs, etc.) that potentially obstruct sight distance. Any property owner, business, agency or utility that places or maintains fixed or temporary objects in the sight distance of vehicles, bicycles or pedestrians should be required to demonstrate that adequate sight distance is provided (per American Association of State Highway and Transportation Officials).[21]

Finally, the City should coordinate with Washington County and ODOT to develop real-time accident reporting statistics that allow the city to prioritize current collision issues, not four to seven year old data. Current vendors exist that provide accident report software (Washington County uses Intersection Magic). Tigard, as one of several cities with this need, should work cooperatively with peer jurisdictions to implement software that prioritizes collision locations, produces detailed accident diagrams to allow for assessment and is real time (no more than 3 to 6 months old data with five years of historical data).

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[20] Multilane Design Alternatives for Improving Suburban Highways, TRB NCHRP Report No. 282, March 1986.

[21] "A Policy on Geometric Design of Highways and Streets", Green Book American Association of State Highway and Transportation Officials, 1994.

ACCESS MANAGEMENT

Access Management is a broad set of techniques that balance the need to provide efficient, safe and timely travel with the ability to allow access to the individual destination. Both Washington County and ODOT have clear and concise access management policies and the supporting documentation to ensure that the highway system is managed as wisely as possible for the traveling public. Proper implementation of Access Management techniques should guarantee reduced congestion, reduced accident rates, less need for highway widening, conservation of energy, and reduced air pollution.

Access management is control or limiting of access on arterial and collector facilities to preserve their functional capacity. Numerous driveways erode the capacity of arterial and collector roadways. Preservation of capacity is particularly important on higher volume roadways for maintaining traffic flow and mobility. Where as local and neighborhood streets function to provide access, collector and arterial streets serve greater traffic volume. Numerous driveways or street intersections increase the number of conflicts and potential for accidents and decrease mobility and traffic flow. Tigard, as with every city, needs a balance of streets that provide access with streets that serve mobility.

Several access management strategies were identified to improve access and mobility in Tigard:

- Provide left turn lanes where warranted for access onto cross streets
- Work with land use development applications to consolidate driveways where feasible
- Meet Washington County/ODOT access requirements on arterials
- Establish City access standards for new developments on collectors and arterials
- Develop city access requirements that are consistent with Metro Title 6 access guidelines

The following recommendations are made for access management:

- Incorporate a policy statement regarding prohibition of new single family residential access on arterials and collectors. A design exception process should be outlined that requires mitigation of safety and NTM impacts. This addresses a problem in Tigard where property owners consume substantial staff time on issues of residential fronting impacts after they have chosen to build adjacent to an arterial.
- Use Washington County and ODOT standards for access on arterials and collectors under their jurisdiction (see tables showing Washington County and ODOT standards in Appendix).
- Specific access management plans be developed for arterial streets in Tigard to maximize the capacity of the existing facilities and protect their functional integrity. New development and roadway projects should meet the following requirements:

Arterial:	Maximum spacing of roadways and driveways = 1,000 feet
	Minimum spacing of roadways and driveways = 600 feet
Collector:	Maximum Spacing of roadways and driveways = 400 feet
	Minimum Spacing of roadways and driveways = 200 feet
All Roads:	Require an access report stating that the driveway/roadway is safe as designed meeting adequate stacking, sight distance and deceleration requirements as set by ODOT, Washington County and AASHTO.

Access management is not easy to implement and requires long institutional memory of the impacts of short access spacing – increased collisions, reduced capacity, poor sight distance and greater pedestrian exposure to vehicle conflicts. The most common opposition response to access control is that "there are driveways all over the place at closer spacing than mine – just look out there". These statements are commonly made without historical reference. Many of the pre-existing driveways that do not meet access spacing requirements were put in when traffic volumes were substantially lower and no access spacing criteria were mandated. With higher and higher traffic volume in the future, the need for access control on all arterial roadways is critical – the outcome of not managing access properly is additional wider roadways which have much greater impact than access control.

Staff will have to come back at a later to date to propose revisions to the development code to reflect the standards being developed in the TSP and Comprehensive Plan. At that time, additional attention can be given to the specific standards and whether exceptions are appropriate to be written into the code or if variances are the action needed. The ODOT Highway Plan spacing standards will apply to ORE 99W (530 - 740 feet), Hall Boulevard (400 - 475 feet) and streets/driveways within 1,320 feet of ORE 217 or I-5 interchanges. For Washington County roads access spacing standards would be 1,000 feet for major arterials, 600 feet for minor arterials and 150 feet for major collectors. The spacing standards outlined in the TSP would apply for City streets 1,000 feet maximum/600 feet minimum for arterials and 400 feet maximum/200 feet minimum for collectors. The maximum and minimum standards balance safety needs and connectivity needs. Additionally, three other standards are recommended. First, a restriction of direct access of new single family units on arterials and collectors (this would include an exception process that addresses safety and neighborhood traffic management needs). Second, an access report with new land development that requires applicants to verify design of their driveways and streets are safe meeting adequate stacking needs, sight distance and deceleration standards as set by ODOT, Washington County, the City and AASHTO (utilizing future traffic volumes from this TSP as a future base for evaluation). Third, driveways should not be place in the influence area of intersections. The influence area is that area where queues of traffic commonly form on the approach to an intersection (typically between 150 to 300 feet). In a case where a project has less than 150 feet of frontage, the site would need to explore potential shared access, or if that were not practical, place driveways as far from the intersection as the frontage would allow (permitting for 5 feet from the property line).

MAINTENANCE

Preservation, maintenance and operation are essential to protect the City investment in transportation facilities. The majority of current gas tax revenues are used to maintain the transportation system. With an increasing road inventory and the need for greater maintenance of older facilities, protecting and expanding funds for maintenance is critical.

A Pavement Management Program is a systematic method of organizing and analyzing information about pavement conditions to develop the most cost effective maintenance treatments and strategies. As a management tool, it aids the decision-making process by determining the magnitude of the problem, the optimum way to spend funds for the greatest return on the dollar, and the consequences of not spending money wisely. Tigard maintains an annual program of pavement management and monitors

conditions in setting priorities for overlays, slurry seals and joint sealing. With over 130 miles of roadway, maintenance is one of the largest transportation expenditures, requiring almost $1,500,000 per year (to put this budget in perspective, this relates to about $2 per foot of road).

A pavement management program can be a major factor in improving performance in an environment of limited revenues. A pavement management program is not and should not be considered the answer to every maintenance question. It is a tool that enables the public works professional to determine the most cost-effective maintenance program. The concept behind a pavement management system is to identify the optimal rehabilitation time and to pinpoint the type of repair which makes the most sense. With a pavement management program, professional judgment is enhanced, not replaced. A critical concept is that pavements deteriorate 40 percent in quality in the first 75 percent of their life. However, there is a rapid acceleration of this deterioration later, so that in the next 12 percent of life, there is another 40 percent drop in quality. A pavement management system can identify when pavements will begin to deteriorate before rapid deterioration starts to focus preventative maintenance efforts cost effectively. These solutions are generally one-fifth to one-tenth the cost required after a pavement is 80 percent deteriorated. Figure 8-22 illustrates the pavement life cycle.

A visual inspection of Tigard's surface street system was prepared by a consultant for the City of Tigard in 1998/99. This inspection produced a "report card" of the street pavement status for each roadway in Tigard. Figure 8-23 summarizes the pavement condition identified on City streets in the last pavement management inspection. The next pavement inspection will be conducted in 2001. Based upon the last inspection, a determination was made that Tigard has approximately a $3,000,000 back log of needed maintenance that cannot be addressed by annual on-going maintenance programs. Tigard has recently taken on the maintenance and operation of several county roads over the past several years. The on-going maintenance budget has increased as Tigard receives more of the statewide motor vehicle fee allocation for roadway preservation and operation. Table 8-10 summarizes the roadway maintenance funding history for the last five fiscal years.

Table 8-10
City of Tigard Street Maintenance Budget Summary[22]

Requirements	FY 96-97 actual	FY 97-98 actual	FY 98-99 budgeted	FY 99-00 budgeted	FY 00-01 budgeted	Description
Street Maintenance						
Overlays/Slurry Seal	$300,000	$300,000	$300,000	$300,000	$380,000	Contracted out
Minor Safety Imp.	$140,000	$140,000	$140,000	$140,000	$140,000	Small Improvements
NTM	$ 45,000	$ 45,000	$ 60,000	$ 60,000	$ 60,000	Traffic Calming
Striping	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 12,000	Restriping roads
Street Program						
Dig Outs/Contracts						Reconstruction, Signs,
LaborOutlay	$523,000	$620,000	$814,000	$1,050,000	$774,000	Guard rail, Sweeping
Capital/Equipment						
Administration	$30,000	$31,000	$41,000	$58,000	$55,000	
Total	**$1,045,000**	**$1,143,000**	**$1,362,000**	**$1,615,000**	**$1,421,000**	

Note: Tigard started maintaining an increase share of County streets from 1997 to present.

[22] Based on information received from Gus Duneas, City of Tigard, February 2000.

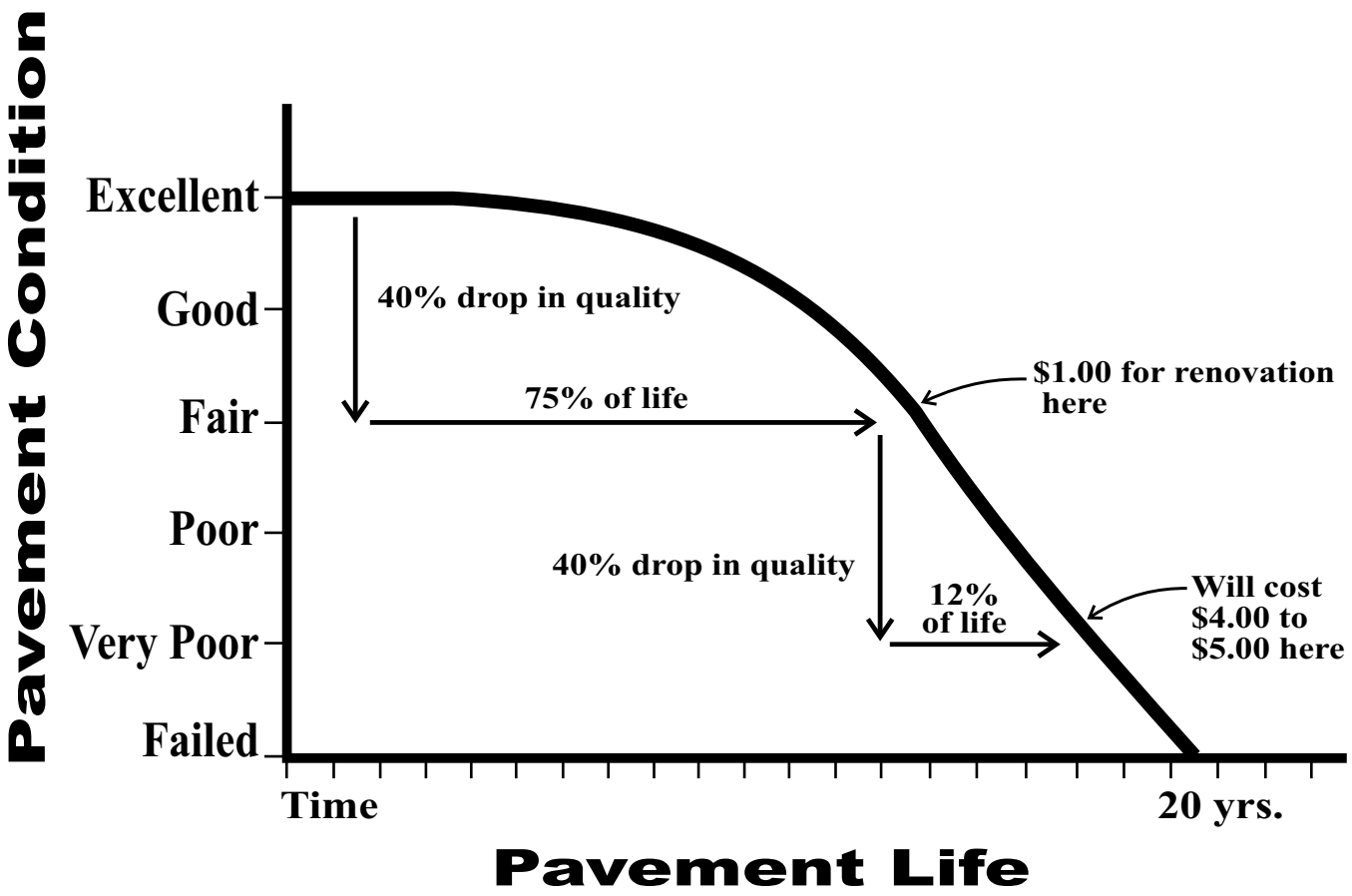


Figure 8-22
PAVEMENT LIFE CYCLE

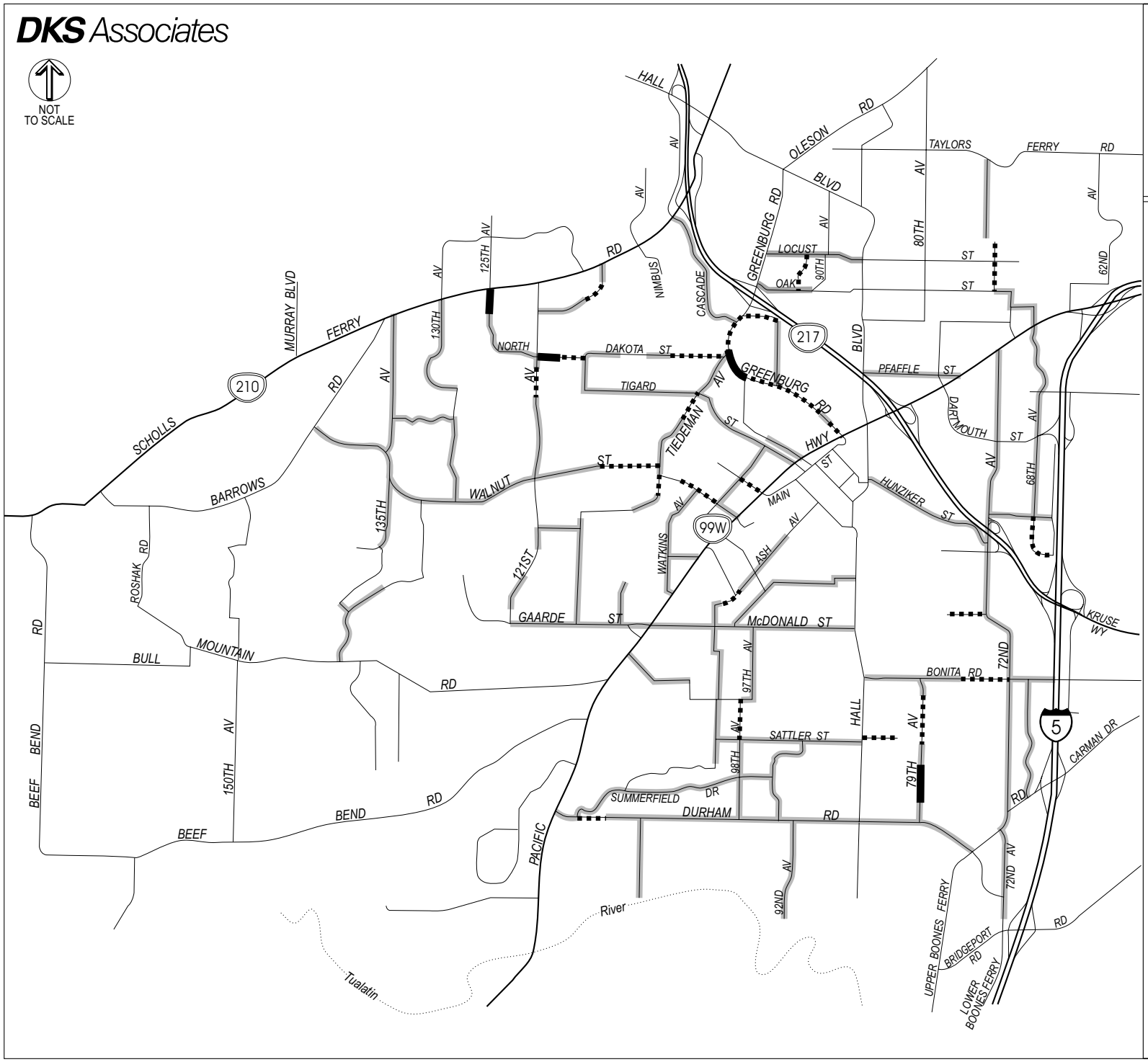


Figure 8-23
PAVEMENT CONDITION ON CITY STREETS

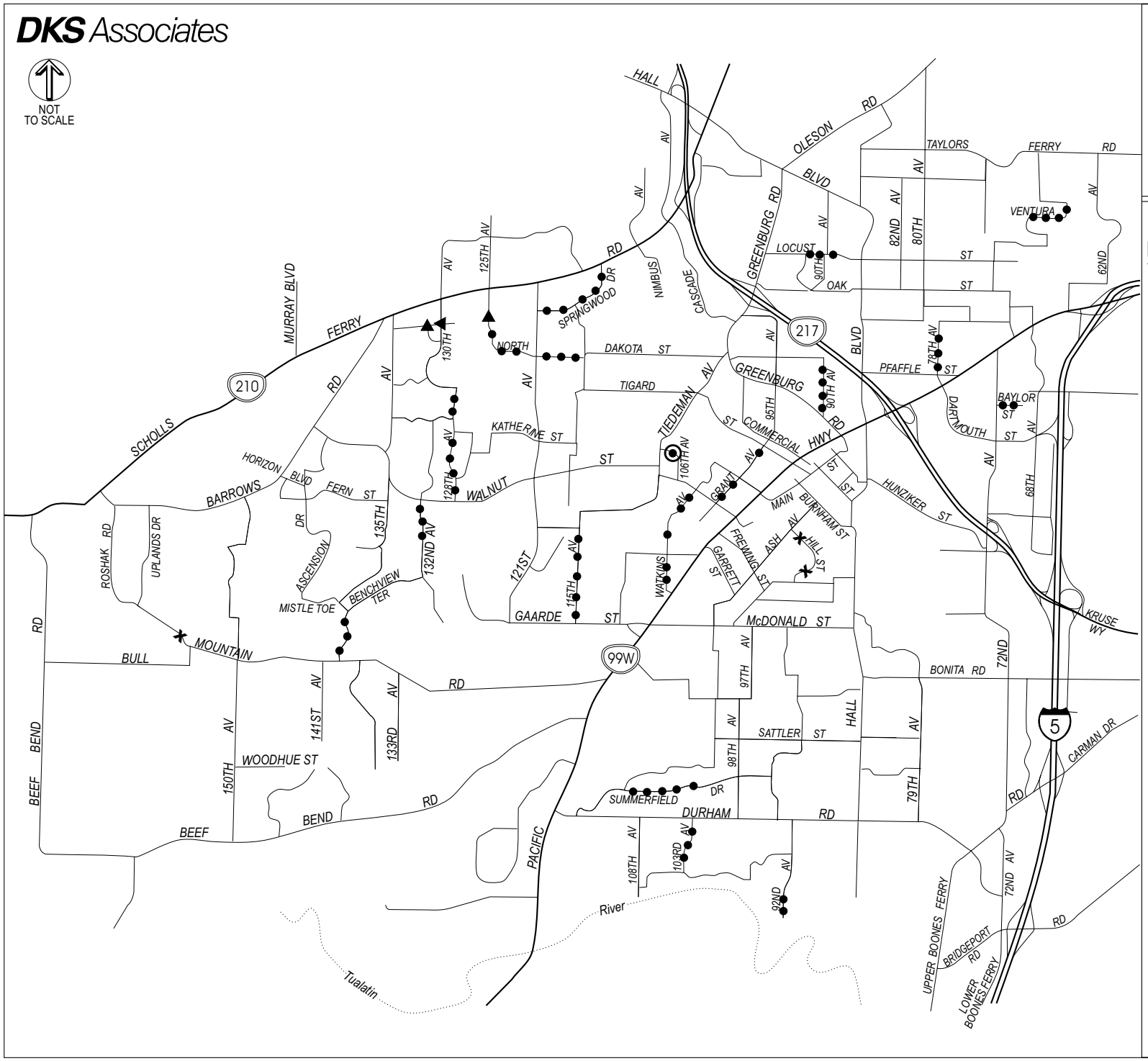
NEIGHBORHOOD TRAFFIC MANAGEMENT

Neighborhood Traffic Management (NTM) is a term that has been used to describe traffic control devices typically used in residential neighborhoods to slow traffic or possibly reduce the volume of traffic. NTM is descriptively called traffic calming due to its ability to improve neighborhood livability. Tigard has done extensive work in the way of testing and implementing NTM measures such as speed humps, chokers, pavement texturing, circles, chicanes and other elements (Figure 8-24). The City initiated a formalized NTM program in 1995 and expends about $60,000 per year in traffic calming city wide. The following are examples of neighborhood traffic management strategies:

- speed wagon (reader board that displays vehicle speed)
- speed humps
- traffic circles
- medians
- landscaping
- curb extensions
- chokers (narrows roadway at spots in street)
- narrow streets
- closing streets
- photo radar
- on-street parking
- selective enforcement
- neighborhood watch

Typically, NTM can receive a favorable reception by residents adjacent to streets where vehicles travel at speeds above 30 MPH. However, NTM can also be a very contentious issue within and between neighborhoods, being viewed as moving the problem rather than solving it, impacting emergency travel or raising liability issues. A number of streets in Tigard have been identified in the draft functional classification as neighborhood routes. These streets are typically longer than the average local street and would be appropriate locations for discussion of NTM applications. A wide range of traffic control devices is being tested throughout the region, including such devices as chokers, medians, traffic circles and speed humps. NTM traffic control devices should be tested within the confines of Tigard before guidelines are developed for implementation criteria and applicability. Also, NTM may be considered in an area wide manner to avoid shifting impacts between areas and should only be applied where a majority of neighborhood residents agree that it should be done. Strategies for NTM seek to reduce traffic speeds on neighborhood routes, thereby improving livability. Research of traffic calming measures demonstrates their effectiveness in reducing vehicle speeds. Table 8-11 summarizes nationwide research of over 120 agencies in North America.

The City could consider adopting a neighborhood traffic management program. This program would help prioritize implementation and address issues on a systematic basis rather than a reactive basis. Criteria should be established for the appropriate application of NTM in the City. This would address warrants, standards for design, funding, the required public process, use on collectors/arterials (fewer acceptable measures – medians) and how to integrate NTM into all new development design.



CITY OF TIGARD

Transportation Systems Plan

Legend

- ● - Speed Hump
- ◉ - Portable Speed Hump
- ▲ - Diverter (Shows Direction)
- X - Islands in Intersection

Figure 8-24
TRAFFIC CALMING MEASURES INVENTORY

Table 8-11
NTM Performance

		Speed Reduction (MPH)			Volume Change (ADT)			
Measures	**No. of Studies**	**Low**	**High**	**Average**	**Low**	**High**	**Ave.**	**Public Satisfaction**
Speed Humps	262	1	11.3	7.3	0	2922	328	79%
Speed Trailer	63	1.8	5.5	4.2	0	0	0	90%
Diverters	39	-	-	.4	85	3000	1102	72%
Circles	26	2.2	15	5.7	50	2000	280	72%
Enforcement	16	0	2	2	0	0	0	71%
Traffic Watch	85	.5	8.5	3.3	0	0	0	98%
Chokers	32	2.2	4.6	3.3	45	4100	597	79%
Narrow Streets	4	5	7	4.5	0	0	0	83%

SOURCE: *Survey of Neighborhood Traffic Management Performance and Results, ITE District 6 Annual Meeting, by R S. McCourt, July 1997.*

PARKING

Parking has not typically been a significant transportation issue in the past for Tigard. New land uses were required to provide the code designated number of parking spaces to assure there would be no impact to surrounding land uses (overflow parking). These parking ratios were developed based upon past parking demand characteristics of each land use type. Most recently, parking has become an element of transportation planning policy through two actions. The adoption of the Transportation Planning Rule in 1991, which was updated in November 1998 (sections 660-12-020(2g) and 660-12-045(5c)) and the Metro Functional Plan of November 1996, Title 2. The City of Tigard has adopted these changes in section 18.765 of its Development Code (refer to Table 18.765.2 Minimum and Maximum Required Off-street Vehicle and Bicycle Parking Requirements). By adopting the minimum and maximum parking ratios outlined in Title 2, the City has addressed the TPR required reduction in parking spaces per capita over time.

Several strategies were identified to address the desire to reduce parking needs in Tigard:

- Shared parking
- Parking pricing
- Parking needs should be reviewed by individual developments at the site plan review stage. Parking provisions should be compared to demand, as identified by ITE or DEQ.[23]
- Maximum Parking Ratios

One of the concerns with parking reduction policies is the impact to adjacent land uses should the vehicle needs of a site exceed the provision of parking.

[23] *Parking Demand*, 2nd Edition, Institute of Transportation Engineers, 1987; and *Peak Parking Space Demand Study*, Oregon Department of Environmental Quality, by JHK & Associates, June 1995.

TRANSPORTATION SYSTEM MANAGEMENT/ INTELLIGENT TRANSPORTATION SYSTEMS

Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system. Measures that can optimize performance of the transportation system include signal improvements, intersection channelization, access management (noted in prior section), HOV lanes, ramp metering, rapid incident response, and programs that smooth transit operation (refer to Table 8-7 for samples of intersection-level TSM improvements). The most significant measure that can provide tangible benefits to the traveling public is traffic signal coordination and systems. Traffic signal system improvements can reduce the number of stops by 35 percent, delay by 20 to 30 percent, fuel consumption by 12.5 percent and emissions by 10 percent[24]. This can be done without the major cost of roadway widening. Ramp metering has been proven to improve freeway performance, reducing travel time, reducing accidents, increasing vehicle speed and reducing fuel consumption. ODOT plans to meter all the on-ramps to I-5 and ORE 217 within Tigard (presently the ORE 217 ramps are metered). As ramp metering is installed in Tigard, the City should work with ODOT to develop ramp meter bypass lanes for high occupancy vehicles and transit.

Several of the strategies were elements of an Intelligent Transportation System (ITS) plan being implemented regionally by ODOT and participating agencies. ITS focuses on a coordinated, systematic approach toward managing the region's transportation multi-modal infrastructure. ITS is the application of new technologies with proven management techniques to reduce congestion, increase safety, reduce fuel consumption and improve air quality. One element of ITS is Advanced Traffic Management Systems (ATMS). ATMS collects, processes and disseminates real-time data on congestion alerting travelers and operating agencies, allowing them to make better transportation decisions. Examples of future ITS applications include routine measures such as "smart" ramp meters, automated vehicle performance (tested recently in San Diego), improved traffic signal systems, improved transit priority options and better trip information prior to making a vehicle trip (condition of roads - weather or congestion, alternative mode options - a current "real time" schedule status, availability/pricing of retail goods). Some of this information will be produced by Tigard, but most will be developed by ODOT or other ITS partners (private and public). The information will be available to drivers in vehicles, people at home, at work, at events or shopping. The Portland region is just starting to implement ITS and the City of Portland, Tri-Met and ODOT have already developed their own ITS strategic plans.

TRUCKS

Efficient truck movement plays a vital role in maintaining and developing Tigard's economic base. Well planned truck routes can provide for the economical movement of raw materials, finished products and services. Trucks moving from industrial areas to regional highways or traveling through Tigard are different than trucks making local deliveries. The transportation system should be planned to accommodate this goods movement need. The establishment of through truck routes provides for this efficient movement while at the same time maintaining neighborhood livability, public safety and minimizing maintenance costs of the roadway system. A map of proposed through truck routes in Tigard was developed (Figure 8-25). This map is built from the approved Through Truck Route Map

[24] *Portland Regionwide Advanced Traffic Management System Plan,* ODOT, by DKS Associates, October 1993.

in the Washington County Transportation Plan (1988), the recent Metro Regional Freight System (1999) and this plan.

The plan is aimed at addressing the through movement of trucks, not local deliveries. The objective of this route designation is to allow these routes to focus on design criteria that is "truck friendly", i.e., 12 foot travel lanes, longer access spacing, 35 foot (or larger) curb returns and pavement design that accommodates a larger share of trucks. Because these routes are through routes and relate to regional movement, they should relate to the regional freight system. The Draft Regional Transportation Plan[25] includes the following routes in the regional freight system in Tigard, which are consistent with the city map:

• I-5, ORE 217 and ORE 99W	Main Roadway Route
• 72nd Avenue south of ORE 217	Road Connector
• Hunziker Street east of Hall Boulevard	Road Connector
• Scholls Ferry Road from east of Nimbus to ORE 217	Road Connector

Key differences from the City TSP truck plan to the to the previously adopted Washington County Plan and Metro RTP include the following:

- Hall Boulevard south of Hunziker Street is removed from the plan along with Durham Road east of Hall Boulevard as shown in the Washington County Plan. In its place Hunziker Street and 72nd Avenue south of ORE 217 are added (as they are in the Regional Freight System).

- Scholls Ferry Road west of Nimbus and east of ORE 217 to Hall Boulevard are retained from the Washington County Plan (although not part of the Regional Freight System) along with Hall Boulevard from ORE 217 to Hunziker.

There are other streets in Tigard that due to their adjacent land uses will need to be "truck friendly". Local industrial streets such as Tech Center Drive and Wall Street would represent samples of streets which where the local industrial street cross-section (Figure 8-7) would apply. In the future, industrial land development will need similar connections to the through truck routes.

Criteria

Tigard's TSP Advisory Committee created a set of goals and policies to guide transportation system development in Tigard (see Chapter 2). Several of these policies pertain specifically to trucks:

Goal 2: Multi-Modal

Policy 1 Develop and implement public street standards that recognize the multi-purpose nature of the street right-of-way for utility, pedestrian, bicycle, transit, truck and auto use.

[25] *Draft Regional Transportation Plan*, Metro, December 1999.

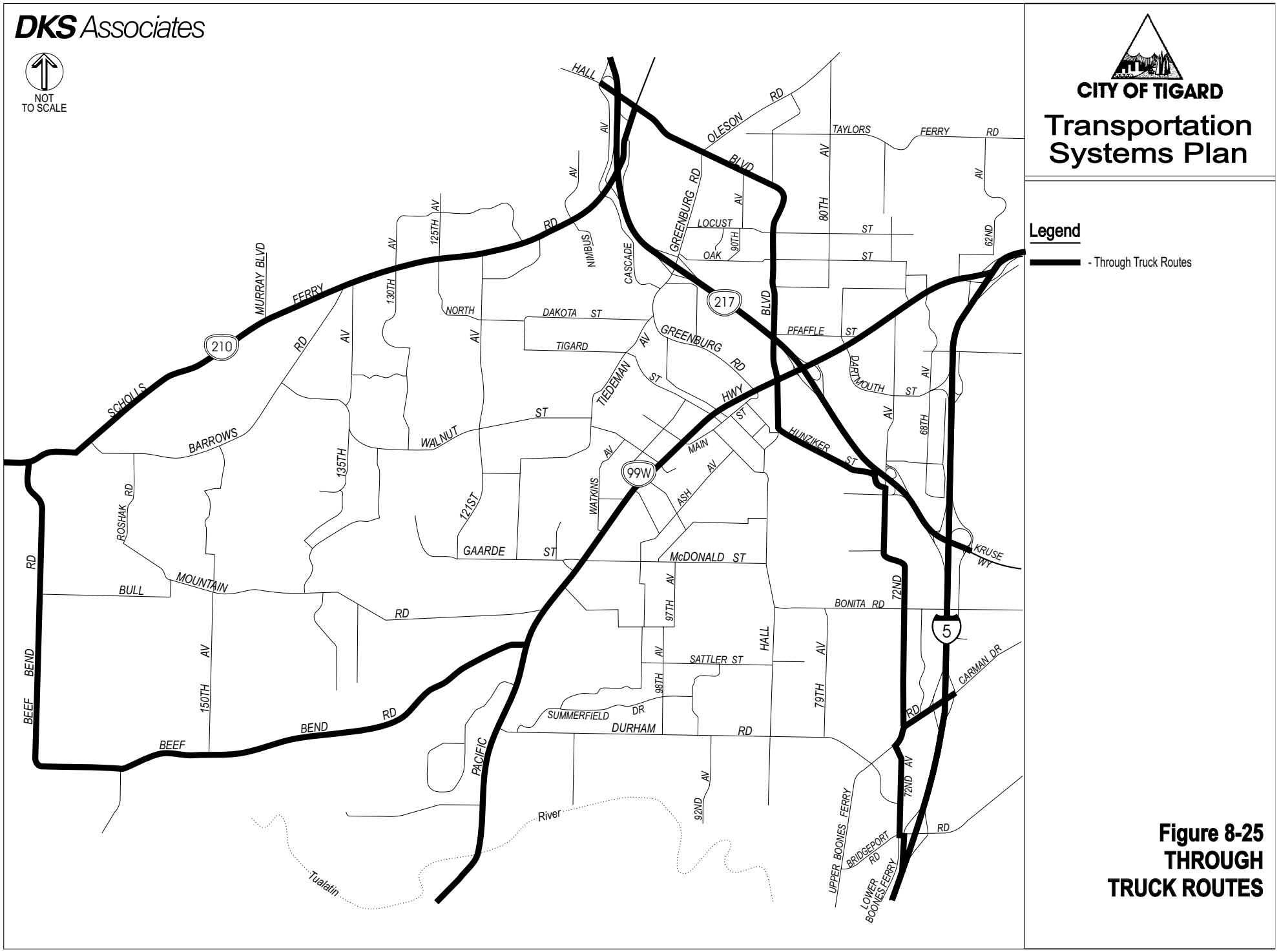


Figure 8-25
THROUGH TRUCK ROUTES

Goal 6: Goods Movement

Policy 1 Design arterial routes, highway access and adjacent land uses in ways that facilitate the efficient movement of goods and services.

Policy 2 Require safe routing of hazardous materials consistent with federal and state guidelines.

These goals and policies are the criteria that all truck related improvements in Tigard should be measured against to determine if they conform to the intended vision of the City.

Chapter 9
Other Modes

This chapter summarizes existing and future rail, air, water and pipeline needs in the City of Tigard. While auto, transit, bicycle and pedestrian transportation modes have a more significant effect on the quality of life in Tigard, other modes of transportation must be considered and addressed.

CRITERIA

No goals or policies were developed related to rail, air, water or pipeline transportation systems.

RECOMMENDED FACILITIES

RAIL

Railroad tracks traverse Tigard from its northern boundary to the southeast. There are two adjacent but separate tracks south from north of North Dakota Street to Bonita Road. South of Bonita Road, one set of tracks crosses the Tualatin River to Tualatin and further south (parallel to I-5 to just north of Salem). The other set of tracks turns east to Lake Oswego/Milwaukie and Southeast Portland. North of Tigard, both tracks go on into Beaverton and Hillsboro. They are both owned by Portland & Western (P&W), a sister company of Willamette & Pacific (W&P) Railroad.

Within the next five years all of the rubberized at-grade crossing panels will be replaced with concrete panels. The concrete panels have longer life and are more skid resistant. Presently all the grade crossings of the railroad and roadways in Tigard are controlled by gated crossings. There are a few private crossings which are not gated. Grade separation of the railroad crossings has not been determined to be necessary at any of the existing crossings. The highest volume at-grade crossing in Tigard is on Scholls Ferry Road. Because of the close proximity of the rail crossing to the ORE 217 interchange, future expansion of ORE 217 should consider the operational need of Scholls Ferry Road south of ORE 217[1].

A commuter rail system, linking Wilsonville and Beaverton/Hillsboro, has been discussed and preliminary analysis has been conducted to determine possible alignments and station locations. The system would travel through Tigard with at least one or two stops in the City. One of the City's policies is to support

[1] Outside the 20 year perspective of this plan, it may become necessary to consider a grade separation of the railroad crossing. While not part of this TSP, this concept should be considered in future planning of the Scholls Ferry Corridor. A grade separation concept may include a viaduct Scholls Ferry Road from ORE 217 to south of Nimbus. Urban interchanges would need to be designed for Nimbus and Cascade This viaduct approach may preclude the need for seven lanes on Scholls Ferry Road. This type of alternatives analysis would be necessary in the project development of any Scholls Ferry Road widening, ORE 217 widening and/or rail crossing changes.

the development of a commuter rail system as part of the regional transit network[2]. The commuter rail project would enhance the rail line by providing sidings (double track) over portions of the alignment. The commuter rail would operate when there is little freight activity.

There has been a recent increase in volume to about eight trains per day through Tigard (includes both northbound and southbound trains—total of about four round-trips per day). P & W anticipates changes in freight service in the near future, but the changes are likely to affect timing rather than the number of trains passing through Tigard.

AIR

Tigard is served by the Portland International Airport, located in Northeast Portland on the Columbia River. The Portland International Airport is a major air transportation and freight facility, which serves Oregon and Southwest Washington. It provides a base for over twenty commercial airlines and air freight operations. The Port of Portland reported nearly 13.7 million passengers were served at the Portland International Airport in 1999[3]. Ground access to Portland International Airport from Tigard is available by automobile, taxi and shuttle (in year 2001 light rail access will be available).

Tigard is also served by the Portland-Hillsboro Airport, a general aviation facility located in the north central portion of the City. The airport facility is owned and operated by the Port of Portland as part of the Port's general aviation reliever system of airports. The Port of Portland maintains a Master Plan for this facility which was most recently updated in October 1996.

No airports exist or are expected within the City in the future. Therefore, no policies or recommendations in this area of transportation are provided for Tigard.

WATER

The Tualatin River is located along the southern border of Tigard. It is used primarily for recreational purposes. No policies or recommendations in this area of transportation are provided.

PIPELINE

There are high pressure natural gas feeder lines owned and operated by Northwest Natural Gas Company along several routes in Tigard. Figure 9-1 shows the feeder line routes for Tigard.[4] No future pipelines are expected within the City. No policies or recommendations in this area of transportation are provided for Tigard.

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[2] *Washington County Commuter Rail Study*, Phase II, Prepared by BRW, etc., May, 1999.
[3] Based upon Port of Portland web page, http://www.portofportlandor.com/1299month.htm
[4] Based on the Portland Area Distribution System Map (Dated September, 1998) received from Northwest Natural Gas Company.

DKS *Associates*

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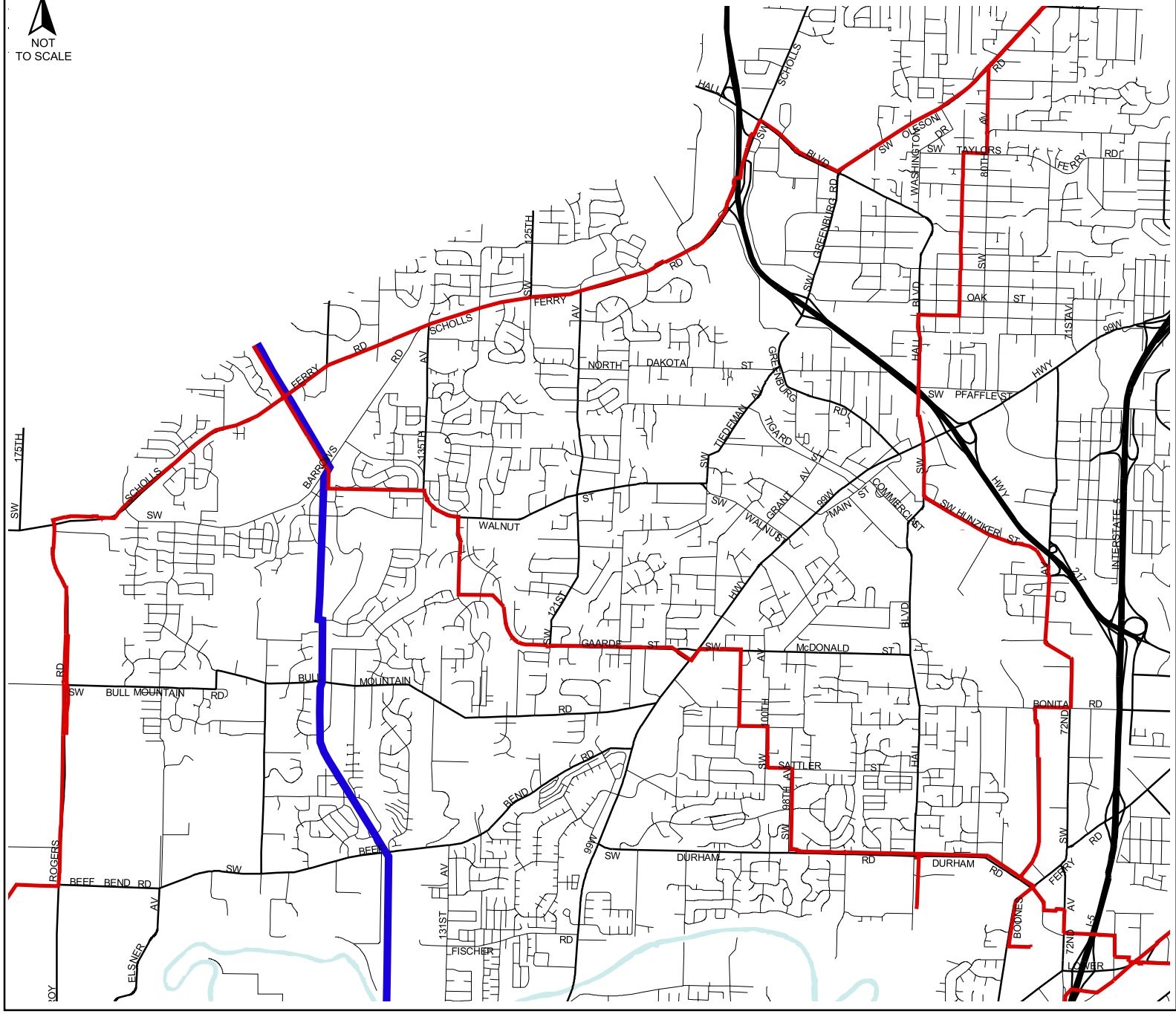
NOT TO SCALE



CITY OF TIGARD
OREGON

Transportation Systems Plan

Legend

- Existing High Pressure Gas Pipeline
- Existing Kinder Morgan Pipeline

Figure 9-1
MAJOR PIPELINE ROUTES

Chapter 10 Transportation Demand Management

CITY OF TIGARD
OREGON

INTRODUCTION

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. The Transportation Planning Rule outlines a goal of reducing vehicle miles traveled (VMT) per capita.[1] TDM measures applied on a regional basis can be an effective tool in reducing vehicle miles traveled. Samples include:

- Employers installing bicycle racks
- Work with property owners to place parking stalls for carpoolers near building entrances
- Provide information regarding commute options to larger employers
- Encourage linkage of housing, retail and employment centers
- Encourage flexible working hours
- Encourage telecommuting
- Provide incentives to take transit and use other modes (i.e. free transit pass)
- Schedule deliveries outside of peak hours

The strategies for transportation demand management were identified in working with the City's TSP Task Force which included the City Planning Commission. These committees provided input regarding the transportation system in Tigard, specifically exploring TDM needs.

BACKGROUND

In 1993, the Oregon Legislature passed a law to help protect the health of Portland area residents from air pollution and to ensure that the area complies with the federal Clean Air Act. The Employee Commute Options (ECO) rules are provisions of the law.[2.] The ECO program requires larger employers to provide commute options to encourage employees to reduce auto trips to the work site. It is one of several strategies included in the Ozone Maintenance Plan for the Portland Air Quality Maintenance Area (AQMA) which will be in place until the year 2006. Employers in the Portland AQMA with more than 50 employees at a work site must provide commute options that have the potential to reduce employee commute auto trips by 10 percent within three years, and maintain the trip reductions through the life of the plan.

TDM can include a wide variety of actions tailored to the individual needs of employers to achieve trip reduction. Table 10-1 provides a list of several strategies identified in the ECO program. Research

[1] By 10 percent over 20 years

[2] Oregon Administrative Rules Chapter 340, Division 30.

Table 10-1
Transportation Demand Management Strategies

Strategy	Description	Potential Trip Reduction
Telecommuting	Employees perform regular work duties at home or at a work center closer to home, rather than commuting from home to work. This can be full time or on selected work days. This can require computer equipment to be most effective.	82-91% (Full Time) 14-36% (1-2 day/wk)
Compressed Work Week	Schedule where employees work their regular scheduled number of hours in fewer days per week (for example, a 40 hour week in 4 days or 36 hours in 3 days)	7-9% (9 day/80 hr) 16-18% (4/40) 32-36% (3/36)
Transit Pass Subsidy	For employees who take transit to work on a regular basis, the employer pays for all or part of the cost of a monthly transit pass.	19-32% (full subsidy, high transit service) 2-3% (half subsidy, medium transit service)
Cash Out Employee Parking	An employer that has been subsidizing parking (free parking) discontinues the subsidy and charges all employees for parking. An amount equivalent to the previous subsidy is then provided to each employee, who then can decide which mode of travel to use (with subsidy above the cost of a monthly transit pass, those employees would realize monetary gain for using transit).	8-20 % (high transit service available) 5-9 % (medium transit services available) 2-4% (low transit services available)
Reduced Parking Cost for HOVs	Parking costs charged to employees are reduced for high occupancy vehicles (HOV) such as carpools and vanpools.	1-3 %
Alternative Mode Subsidy	For employees that commute to work by modes other than driving alone, the employer provides a monetary bonus to the employee. Most often, the bonus is provided monthly in the employee's paycheck.	21-34% (full subsidy of cost, high alt.modes) 2-4% (half subsidy of cost,medium alt.modes)
On-Site Services	Provide services at the worksite that are frequently used by the employees of that worksite. Examples include cafes, restaurants, dry cleaners, day care and bank machines.	1-2 %
Bicycle Program	Provides support services to those employees that bicycle to work. Examples include: safe/secure bicycle storage, shower facilities and subsidy of commute bicycle purchase.	0-10 %
On-site Rideshare Matching for HOVs	Employees who are interested in carpooling or vanpooling provide information to a transportation coordinator regarding their work hours, availability of a vehicle and place of residence. The coordinator then matches employees who can reasonably rideshare together.	1-2 %
Provide Vanpools	Employees that live near each other are organized into a vanpool for their trip to work. The employer may subsidize the cost of operation and maintaining the van.	15-25% (company provided van with fee) 30-40% (company subsidized van)
Gift/Awards for Alternative Mode Use	Employees are offered the opportunity to receive a gift or an award for using modes other than driving alone.	0-3 %
Provide Buspools	Employees that live near each other or along a specified route are organized into a buspool for their trip to work	3-11 %
Walking Program	Provide support services for those who walk to work. This could	0-3 %

Strategy	Description	Potential Trip Reduction
	include buying walking shoes or providing showers.	
Company Cars for Business Travel	Employees are allowed to use company cars for business-related travel during the day.	0-1 %
Guaranteed Ride Home Program	A company owned or leased vehicle or taxi fare is provided in the case of an emergency for employees that use alternative modes.	1-3 %
Time off with Pay for Alternative Mode Use	Employees are offered time off with pay as an incentive to use alternative modes (rather than monetary, bonus, gift or awards)	1-2 %

SOURCE: *Guidance for Estimating Trip Reductions From Commute Options,* Oregon Department of Environmental Quality, August 1996.

has indicated that a comprehensive set of complementary policies implemented over a large geographic area can have an effect on vehicle miles traveled[3]. However, the emphasis of much of the research indicates that these policies must go well beyond the low-cost, uncontroversial measures commonly attributed to TDM (such as carpooling, transportation coordinators/associations, priority parking spaces) to be effective. Elements including parking and congestion pricing, improved services for alternative modes and other market-based measures are needed for TDM to have significant impact on reducing overall vehicle miles traveled.

At the same time, the same research indicates that employee trip reduction programs can be an effective instrument of localized congestion relief[4]. For example, employers can substantially reduce peak hour trips by shifting work schedules, which may not reduce VMT but can effectively manage congestion. In Wilsonville, a Nike warehouse/distribution site generates 80% less vehicle trips than standard similar uses in the evening peak hour by using employee shifts that are outside the peak period (4 - 6 PM) [5]. This type of congestion management technique can extend the capacity of transportation facilities.

CRITERIA

Tigard TSP Task Force created/refined a set of goals and policies to guide transportation system development in Tigard (see Chapter 2). Goal 2 directly addresses reduction in travel, forming the basis for TDM.

Goal 2 *Policy 7* *Tigard will participate in vehicle trip reduction strategies developed regionally*

DEQ and Metro have developed regional policies regarding trip reduction. Some of these policies are aimed at provision of parking and others are aimed at ridesharing (Employee Commute Options—ECO rules).

[3] *The Potential for Land Use Demand Management Policies to Reduce Automobile Trips,* ODOT, by ECO Northwest, June 1992.

[4] *Evaluation of Employee Trip Reduction Programs Based upon California's Experience with Regulation XV,* Institute of Transportation Engineers, Technical Council Committee 6Y-51, January 1994.

[5] *Nike Parking Lot Expansion Trip Generation Study,* City of Wilsonville, by DKS Associates, May 1997.

STRATEGIES

Several strategies were evaluated by the TSP Task Force for transportation demand management in Tigard. These strategies are aimed at providing the City with priorities toward implementing transportation demand management projects that meet the goals and policies of the City. The ranking of the strategies follows from most important to least important:

- Focus programs on high demand districts (ie. Downtown Tigard, Tigard Triangle and Washington Square)
- Telecommuting/Fiber Optic to all residents and businesses
- Require larger employers to meet DEQ's ECO rules
- Encourage linkage of housing with retail and employment centers
- Mandate TDM though development review (would reinforce regional DEQ requirements)
- Limiting Parking (establish maximum parking ratios)
- City funded program to provide information regarding commute options to larger employers (possibly via web page and email)
- Support regional pricing policies/strategies
- Do nothing related to TDM
- Provide business association support for TDM coordination

RECOMMENDED PLAN

State, regional and county policy[6] all call for encouraging and promoting transportation demand management. The proposed policy of this plan calls for the city to support TDM. Collectively, the implementation of the modal plans in this TSP, along with the TDM plan, will contribute to the regional VMT reduction goal. Unlike bicycles, pedestrians and motor vehicles, implementation of this policy does not necessarily require capital infrastructure. In fact, much more of TDM is policy and management rather than concrete and asphalt. Because of this, the recommended TDM plan for Tigard consists of the following:

- Support continued efforts by Washington County, Metro, ODOT, DEQ, Tri-Met and the Westside Transportation Alliance to develop productive TDM measures that reduce VMT and peak hour trips. Focus attention in Washington Square, downtown Tigard and Tigard Triangle.

- Encourage the development of high speed communication in all parts of the city (fiber optic, digital cable, DSL,….). The objective would be to allow employers and residents the maximum opportunity to rely upon other systems for conducting business and activities than the transportation system during peak periods.

- Encourage development that effectively mix land uses to reduce vehicle trip generation. These plans may include development of linkages (particularly non-auto) that support greater use of alternative modes. Land use density should be higher at commuter rail transit stations (half mile radius) than elsewhere in the community (Tigard Transit Center and Washington Square Station areas).

- Mixed land use projects have demonstrated the ability to reduce vehicle trips by capturing internal

[6] Transportation Planning Rule, Section 660-12-035; Regional Transportation Policy, Metro, July 1996, page 1-39; and Washington County Transportation Plan, October 1988, page 30.

trips between land use types, encouraging walk/bike trips and producing shorter vehicle trips[7].

- As vehicle traffic levels increase with the build out of land uses within Tigard, it may become necessary to go beyond the coordination with the regional Employee Commute Options program developed by DEQ. This may include developing localized TDM programs for the city or subareas of the city to address vehicle trip reduction. For example, measures which are appropriate for site planning such as close-in parking for carpools, bicycle parking and convenient transit stops are already part of the Community Development Code (Section 18.765.030(F) calls for close in carpool parking for lots with 20 or more long term spaces and Section 18.360.090 requires pedestrian access to transit).

- As a capital oriented element, coordinate with ODOT and Tri-Met on the development of park-and -ride transit station or freeway interchange locations in Tigard (these are locations proven to be successful in attracting carpool/transit use). Figure 7-2 shows the current park and ride locations. Expansion of these sites should focus on transit station or freeway interchange locations. Interchange reconstruction projects should be required to identify potential sites for park-and-ride (even small sites of 50 spaces). Over the next 20 years, a reasonable budget for park-and-ride expansion might be about $100,000 per year (about 50 spaces a year, assuming pre-existing ROW).

[7] *Trip Generation, 5th edition,* Institute of Transportation Engineers, 1991, Chapter VII, indicates potential for PM peak hour capture of between 27% and 66%.

Chapter 11 Funding/ Implementation

This chapter outlines the funding sources that can be used to meet the needs of the transportation system. The costs for the elements of the transportation system plan are outlined and compared to the potential revenue sources. Options are discussed regarding how costs of the plan and revenues can be balanced.

Transportation funding is commonly viewed as a user fee system where the users of the system pay for infrastructure through motor vehicle fees (such as gas tax and registration fees) or transit fares. However, a great share of motor vehicle user fees goes to road maintenance, operation and preservation of the system rather than construction of new system capacity. Much of what the public views as new construction is commonly funded (partially or fully) through property tax levies, traffic impact fees and fronting improvements to land development. In Washington County, the Major Streets Transportation Improvement Program (MSTIP) and traffic impact fees (TIF), similar to system development charges (SDC) are key examples.

The transportation needs typically out pace dedicated funding sources. The key to balancing needs and funding are user fees. Motor vehicle fees have become a limited source of funding new transportation system capacity due to many factors:

- Gas taxes have been applied on a fixed cents per gallon basis not a percentage basis. Increases in the gasoline tax have not kept pace with cost of transportation needs. The Department of Transportation's Bureau of Transportation Statistics data indicates that in real terms the amount of federal gas tax paid by American households has actually declined by 41 percent from 1965 (when Interstate freeway building was at its peak) to 1995. That occurred with the real dollar gas tax increasing from 4 cents to 18.4 cents in the same time frame.

- Oregon gas taxes have not increased since 1992 (currently 24 cents per gallon) and registration fees have been at $15 per vehicle per year for over ten years. Significant new roadway construction particularly that attributed to new development, has increased Tigard's inventory of roads and maintenance during this time. Additionally, the demands of region-wide growth have increased the need for capacity improvements in the system. The most current proposal for increased gas tax (Measure 82) is before the voters in May 2000.

- Significant improvements in fuel economy over the last 15 years have reduced the relationship of user fees to actual use. For example, a passenger car with 12,000 miles of use in a year at 15 miles per gallon could generate about $350 per year in revenue using current federal, state and county gas tax levels (about 44 cents) compared to less than $200 per year with a 27 miles per

gallon vehicle (a 45 percent reduction). Unfortunately the same vehicle does not use less roadway capacity.

- The bill is coming due on many roads built 20 years ago in terms of maintenance. As the inventory of roads increased, the use of the roads increased faster. This is evident from national transportation statistics. The number of passenger cars and miles of urban roadways doubled from 1960 to 1995. However, the number of vehicle miles traveled on those roadways increased 470%. This increased use proportionally increases maintenance needs. Many of these roads are heavily used and the maintenance activities in the urban area have a substantial impact on operation unless work is conducted in off-peak periods, which increases the cost to maintain these roads. To compound matters, the amount of passenger car fuel consumed from 1960 to 1995 has only increased 66%, reducing the rate that revenue comes in from user fees relative to actual use.

FUNDING

Funding Sources and Opportunities

There are several potential funding sources for transportation improvements. Table 11-1 summarizes several funding options available for transportation improvements. These are sources that have been used in the past by agencies in Oregon. In most cases these funding sources when used collectively are sufficient to fund transportation improvements for local communities. Due to the complexity of today's transportation projects, it is necessary to seek several avenues of funding projects. Unique or hybrid funding of projects generally will include these funding sources combined in a new package. Examples of funding sources which generally do not provide funding for roadways include: Property Tax General Funds, Car Rental Tax, Transient Lodging Tax, Business Income Tax, Business License Tax and Communication Services Tax.

The federal gas tax is allocated through Intermodal Surface Transportation Efficiency Act (ISTEA). The United States Congress has approved reauthorization of transportation funding (TEA 21) for another six years. Federal transportation funds are primarily distributed in the Portland region by Metro (hence the term "regional funds"). ISTEA/TEA 21 funds are much more flexible than state gas tax funds, with an emphasis on multi-modal projects. ISTEA/TEA 21 funds are allocated through several programs including the National Highway System (NHS), Surface Transportation Program (STP) and Congestion Mitigation and Air Quality (CMAQ) Improvement Programs. NHS funds focus on the interstate highway system and CMAQ funds are targeted for air quality non-attainment areas.

Within the Portland region, funding for major transportation projects often is brought to a vote of the public for approval. This is usually for a large project or list of projects. Examples of this public funding includes the Major Streets Transportation Improvement Program (MSTIP) in Washington County, the Westside Light Rail Project and prior transportation bond measures in Tigard. Because of the need to gain public approval for transportation funding, it is important to develop a consensus in the community that supports needed transportation improvements. That is the value of the Transportation System Plan. In most communities where time is taken to build a consensus regarding a transportation plan, funding sources can be developed to meet the needs of the community.

Table 11-1
Potential Transportation Revenue Sources

Type	Description
Traffic Impact Fees (TIF) & System Development Charges (SDC)	Traffic Impact Fees or System Development Charges (SDCs) have been used in Oregon and throughout the United States. The cornerstone to development of TIF/SDCs involves two principles: 1) there must be a reasonable connection between growth generated by development and the facilities constructed to serve that growth (generally determined by level of service or connectivity); and 2) there must be a general system-wide connection between the fees collected from the development and the benefits development receives. Charges are typically developed based on a measurement of the demand that new development places on the street system and the capital costs required to meet that demand. Washington County has a traffic impact fee (TIF) which is a voter approved tax. SDCs do not require a vote of the public and are not a tax.
Gas Tax	The State, cities and counties provide their basic roadway funding through a tax placed on gasoline. State gas tax is approved legislatively while voters approve local gas taxes. State funds are dedicated to roadway construction and maintenance, with one percent allocated to pedestrian and bicycle needs. This tax does not fall under the Measure 5 limits, because it is a pay-as-you-go user tax. Washington County has a one cent gas tax and a recent ballot initiatives to increase this county tax failed.
Other Motor Vehicle Fees	The state collects truck weight mile taxes, vehicle registration fees and license fees. These funds are pooled together with the gas tax in distributing state motor vehicle fees to local agencies. Annual motor vehicle fee allocations to Washington County highways amount to about $100 million (including gas tax). Washington County considered raising motor vehicle registration by $15 per year in 1997 but it was not approved.
Street Utility Fees	Certain cities have used street utility fees for maintenance. The fees are typically collected monthly with water or sewer bills. These funds are not for capacity improvements, but for supporting local roadway maintenance based upon land use type and trip generation. This frees other revenue sources for capacity needs. Utility fees can be vulnerable to Measure 5 limitations, unless they include provisions for property owners to reduce or eliminate charges based on actual use.
Exactions	Frontage improvements are common examples of exaction costs passed to developers. These have been used to build much of Tigard's local street system. Developers of sites adjacent to unimproved roadway frontage are responsible for providing those roadway improvements. Developers of sites adjacent to improvements identified as TIF/SDC projects can be credited the value of their frontage work, which is included in the TIF/SDC project-list cost estimate.
Local Improvement Districts (LID)	LIDs provide a means for funding specific improvements that benefit a specific group of property owners. Assessments are placed against benefiting properties to pay for improvements. LIDs can be matched against other funds where a project has system wide benefit beyond benefiting the adjacent properties. Similarly, districts can be created for tax increment type financing. In Tigard, legal and public acceptance issues with LIDs have made them less effective and expense to administer.
Special Assessments	A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking and CBD or commercial zone transportation improvements. These assessments would likely fall within the Measure 50 limitations. In Washington County, other examples of transportation assessments include MSTIP (Major Streets Transportation Improvement Program) and the urban road maintenance district property tax levy. Both of these are property tax assessments which have been imposed through votes of the public. A regional example would be the Westside LRT where the local share of funding was voter approved as an addition to property tax. Tigard is forwarding a transportation bond measure to the voters in 2000.
Driveway Fees	Gresham collects a Public Street Charge and a Driveway Approach Permit Fee. These fees are project specific and revenue varies year to year based upon development permits. These funds are used for city maintenance and operation.
Employment Taxes	Tri-Met collects a tax for transit operations in the Portland region through payroll and self employment taxes. Approximately $120 million are collected annually in the Portland region for transit.
Oregon Special Public Works Fund	The Special Public Works Fund (SPWF) Program was created by the legislature in 1985 as an economic development element of the Oregon Lottery. The program provides grants and loan assistance to eligible municipalities. There has been limited use of these funds on urban arterials. These funds are commonly used on state highways (a recent Portland area example being Immediate Opportunity Funds used for the US 26/Shute interchange associated with Nike).

Traffic impact fees (TIF) are used to off set the cost of growth related capacity needs within the transportation system. Washington County oversees administration of the TIF program coundtywide, but each city assesses, collects and spends TIF funds for their own jurisdiction. The fee is updated periodically to adjust for inflation. System development charges (SDCs) are similar to TIF, except TIF require a vote of the public for implementation where SDCs do not. Both SDCs and TIFs rely upon a strong nexus between the impact of growth on the transportation system and the cost for transportation capacity improvements to serve land use growth. For example, maintenance costs or upgrading design without adding capacity are elements that would not be included in a TIF or SDC. SDC can also be placed over districts to address growth related impacts. In Wilsonville, the city has imposed an interchange SDC to provide local matching funds to ODOT for the widening of the I-5/Wilsonville Road interchange. New development pays a SDC for each trip they add to the I-5/Wilsonville Road interchange area in the PM peak hour. Table 11-2 provides a comparison of SDC/TIF rates in the Portland region.

Table 11-2
Sample TIF in the Region

Land Use	Residential Cost per Dwelling Unit		Non-Residential Cost per 1,000 Square Feet				
ITE Code	Single Family 210	Multi-Family 220	Light Indust 110	Office* 710	Medical Office 720	Retail* 820	Fast Food 834
Lake Oswego	$ 3,592	$ 2,573	$ 3,820	$ 6,383	$ 13,221	$ 4,002	$ 61,052
Vancouver	$ 989	$ 672	$ 313	$ 710	$ 1,844	Traffic Stdy	$ 4,071
Gresham	$ 1,202	$ 750	$ 1,166	$ 2,225	$ 4,855	$ 3,641	$ 17,386
Troutdale	$ 588	$ 285	$ 570	$ 1,088	$ 2,375	$ 3,393	$ 24,642
Wilsonville	$ 2,256	$ 1,573	$ 2,547	$ 3,700	$ 3,700	$ 4,755	$ 14,265
Washougal	$ 775	$ 445	$ 752	$ 1,159	$ 3,132		
Clark County: Mt. Vista	$ 2,638	$ 1,787	$ 1,807	$ 3,169	$ 7,415	$ 3,359	$ 32,062
Clark County: Orchards	$ 1,161	$ 786	$ 795	$ 1,394	$ 3,262	$ 1,478	$ 14,107
Washington County	$ 1,790	$ 1,181	$ 1,199	$ 2,034	$ 5,604	$ 2,998	$ 4,500
Clackamas County	$ 1,277	$ 884	$ 985	$ 1,557	$ 5,108	$ 2,874	$ 12,895
Battleground	$ 2,869	$ 1,988	$ 1,955	$ 3,169	$ 8,489	$ 3,894	$ 27,226
Ridgefield	$ 1,913	$ 1,099	$ 1,858	$ 4,243	$ 7,728	$ 11,042	$ 80,192
Camas (proposed)	$ 1,416	$ 921	$ 1,348	$ 2,626	$ 4,592	$ 2,708	$ 21,636
West Linn	$ 2,170	$ 1,470	$ -	$ 2,961	$ -	$ 8,349	$ -

Note: Assumes a 100,000 sf office and a 150,000 sf retail center.

COSTS

Cost estimates (general order of magnitude) were developed for the projects identified in the motor vehicle, bicycle and pedestrian elements. Costs estimates from the RTP or MSTIP projects in Tigard were used in this study. Other projects were estimated using general unit costs for transportation improvements, but do not reflect the unique project costs that can (on some projects due to right-of-way, environmental mitigation and/or utilities) significantly add to project cost (25 to 75 percent in some cases, due to environmental, utility or right-of-way issues). Development of more detailed project costs can be prepared in the future with project development. Since many of the projects are multi-modal, the costs were developed at a project level incorporating all modes, as appropriate. It may be desirable to break project mode elements out separately, however, in most cases, there are greater cost efficiencies of undertaking a combined, overall project. Each of these project costs will need further refinement to detail right-of-way requirements and costs associated with special design details as projects are pursued. Table 11-3 summarizes the elements of the plan that were not project specific and how costs will be addressed for these elements.

It should be noted that all costs are 2000 based. Using the Engineering News Record[1] research on historical construction costs, it can be anticipated that (based on the past ten years) construction costs will increase 2.5 percent per year. Since 1980, construction costs have increased 196 percent over 20 years.

Tables 11-4, 11-5, 11-6 and 11-7 summarize the key projects in the TSP by three key groups including:

- Bicycle Improvements
- Pedestrian Improvements
- Motor Vehicle Improvements

Many of the project costs have been developed by Washington County, Metro or ODOT for projects in the RTP. These project costs have been utilized for the purposes of this TSP.

[1] Engineering News Record, construction cost index data, enr.com.

Table 11-3
Issues With Non-Auto, Pedestrian and Bicycle Costs

Mode	Issues
Parking	The TSP does not define specific projects. Off-street parking will be provided by private property owners as land develops.
Neighborhood Traffic Management	Specific NTM projects are not defined. Traffic humps can cost $2,000 to $4,000 each and traffic circles can cost $3,000 to $8,000 each. A speed trailer can cost about $10,000. Based upon this continuing the existing City program of about $50,000 per year meet future needs.
Public Transportation	Tri-Met will continue to develop costs for implementing transit related improvements. The City can supplement this by incorporating transit features through development exactions and roadway project design. Developing new transit services in Tigard similar to the corridor services outlined in the TSP will require Tri-Met to reallocate funding or seek additional sources of operating funds.
Commuter Rail	Washington County is currently in the environmental phase of this project that may cost between $60 and $80 million. The City should work with Washington County and Yamhill County to encourage the development of a western commuter rail line to Yamhill County and points west.
Trucks/Freight	Roadway funding will address these needs. Roadway overcrossings of railroads can use special Public Utilities Commission funds set aside for safety improvements to railroad crossings.
Rail	Costs to be addressed and funded by private railroad companies and the state.
Air, Water, Pipeline	Not required by City.
Transportation Demand Management	DEQ has established regional guidelines. Private business will need to support employee trip reduction programs. In the future, the city may need to support a supplemental program that may have a cost range of $25,000 to $50,000 per year.

Table 11-4
Pedestrian Action Plan Project List

Rank*	Project	From	To	Cost
H	North Dakota Street	121st Avenue	Greenburg Road	$230,000
H	McDonald Street	ORE 99W	Hall Boulevard	$200,000
H	Tiedeman Avenue	Walnut Street	Greenburg Road	$350,000
H	Oak Street (RTP 6019)	Hall Boulevard	80th Avenue	$500,000
H	ORE 99W	McDonald Street	South City Limits	$500,000
M	Bull Mountain Road	ORE 99W	Beef Bend Road	$1,200,000
M	Roshak Road	Bull Mountain Road	Scholls Ferry Road	$300,000
M	121st Avenue	Gaarde Street	North Dakota Street	$450,000
M	Hunziker Street	Hall Boulevard	72nd Avenue	$250,000
M	Washington Square Regional Center	Pedestrian Improvements (RTP 6022)		$6,000,000
L	Taylor's Ferry Rd	Washington Drive	62nd Avenue	$1,000,000
L	Washington Drive	Hall Boulevard	Taylor's Ferry Road	$200,000
			Subtotal	**$11,800,000**
Sidewalks to be built with Street Improvements				
H	Bonita Road	West of 72nd Avenue	72nd Avenue	$50,000
H	Walnut Street	135th Avenue	Tiedeman Avenue	$570,000
H	Gaarde Street	Walnut Street	ORE 99W	$620,000
H	Hall Boulevard	Scholls Ferry Road	Pfaffle Street	$1,000,000
H	Dartmouth Street	72nd	68th Avenue	$120,000
H	Tigard Street	115th Street	Main Street	$350,000
H	Burnham Street	Main Street	Hall Boulevard	$100,000
H	Fonner Street	walnut Street	121st Avenue	$250,000
H	Commercial Street	Main Street	Lincoln Street	$50,000
M	72nd Avenue	ORE 99W	Bonita Road	$1,200,000
M	Hall Boulevard	North of Hunziker Street	South City Limits	$670,000
M	Beef Bend Road	ORE 99W	Scholls Ferry Road	$1,000,000
M	Barrows Road	Scholls Ferry Road (W)	Scholls Ferry Road (E)	$950,000
L	72nd Avenue	Carman/Upper BoonesFry.	Durham Road	$250,000
			Subtotal	**$7,180,000**
	Annual Sidewalk Program at $50,000 per year for 20 years			**$1,000,000**
			Action Plan Total	**$19,360,000**

Table 11-5
Bicycle Action Plan Improvement List and Cost

RANK*	Project	From	To	Cost
H	Hunziker Street	Hall Boulevard	72nd Avenue	$250,000
H	Bonita Road	72nd Avenue	West of 72nd Ave.	$50,000
H	Burnham Street	Main Street	Hall Boulevard	$135,000
H	Oak Street (RTP 6019)	Hall Boulevard	90th Avenue	$300,000
H	98th Avenue	Murdock Stret	Durham Road	$275,000
H	92nd Avenue	Durham Road	Cook Park	$270,000
H	Tiedeman Avenue	Greenburg Road	Walnut Street	$250,000
M	121st Avenue	Walnut Street	Gaarde Street	$400,000
L	Taylor's Ferry Road	Washington Drive	City Limits	$500,000
L	Washington Drive	Hall Boulevard	Taylor's Ferry Rd	$100,000
L	O'Mara Street	McDonald Street	Hall Boulevard	$275,000
L	Frewing Street	ORE 99W	O'Mara Street	$150,000
			Subtotal	**$2,955,000**
H	Gaarde Street	Walnut Street	ORE 99W	$600,000
H	Hall Boulevard	Scholls Ferry Road	Locust Street	$500,000
H	Greenburg Road	Hall Boulevard	Cascade Avenue	$300,000
H	ORE 99W	East City Limits	South City Limits	$1,300,000
M	72nd Avenue	ORE 99W	South City Limits	$960,000
M	Hall Boulevard	Pfaffle Street	Bonita Road	$550,000
M	Carman Drive	I-5	Durham Road	$200,000
M	Walnut Street	ORE 99W	Barrows Road	$1,400,000
M	Barrows Road	Scholls Ferry Road (W)	Scholls Ferry Rd. (E)	$900,000
L	Bull Mountain Road	150th Avenue	Beef Bend Road	$550,000
L	Beef Bend Road	ORE 99W	Scholls FerryRd.	$1,600,000
			Subtotal	**$8,860,000**
Multi- Use Pathways				
H	Hunziker Link to LO	Linkage to Kruse Way Trail in Lake Oswego		$500,000
M	Fanno Creek Trail	Tualatin River to City Hall, ORE 99W to Tigard		$3,600,000
M	Tualatin River Trail	Adjacent to Cook Park from Powerlines to Fanno		$2,600,000
M	Tualatin River Crossing	Near 108th Avenue		$3,000,000
L	Powerlines Corridor	From Beaverton to Tualatin River Trail		$2,500,000
			Subtotal	**$12,200,000**
		Action Plan Total		**$24,015,000**

***** H=High, M=Medium, L=Low Priority

Table 11-6
Future Street Improvements
(All Projects include sidewalks, bicycle lanes and transit accommodations as required)

Table 11-6 Location	Description	Cost Estimate	Funding Status*
I-5	Widen to 4 plus auxiliary lanes (each direction) between ORE 217 and I-205 Provide additional throughput capacity (each direction) south to Wilsonville	$200,000,000 $50,000,000	Not Funded Not in any plan
ORE 217	Widen to 3 lanes plus auxiliary lanes (each direction) between US 26 and 72nd Avenue New ORE 217/I-5 interchange between 72nd Avenue and Bangy Road Phase 2 Phase 3	$240,000,000 $39,000,000 $15,000,000	Not Funded In RTP (as widening or HOV or HOT) Phase 1 Funded Phase 2 & 3 in RTP RTP 6027 & 6028
ORE 99W	Widen to 7 lanes (total—both directions) between I-5 and Greenburg Road	$25,000,000	RTP 6039
I-5 to ORE 99W	Connector linking I-5 and ORE 99W (model assumed connector would be located north of Sherwood—specific location to be determined by further study)	$250,000,000	RTP 6005 (Toll Route)
Overcrossings over ORE 217	5 lane overcrossings linking Washington Square and Cascade Avenue—one north of Scholls Ferry Road, one south of Scholls Ferry Road to Nimbus Connector Road Nimbus south to Greenburg	$40,000,000 $15,000,000	RTP 6011 & 6052 RTP 6053
Overcrossing of I-5	Widen Carman Drive interchange overcrossing to six lanes from four (two through lanes each way, side by side left turn lanes).	$4,000,000	Not Funded In no Plans
Scholls Ferry Road	Widen to 7 lanes (total—both directions) between ORE 217 and Barrows Road (East) TSM/Corridor Signal Timing/ITS	$30,000,000 $500,000	To 125th – RTP 6021 West of 125th not funded RTP 6025
Greenburg Road	Widen to 4 lanes adjacent to cemetery (Hall to Locust) Widen to 5 lanes: Locust to Shady Lane Shady Lane to North Dakota Tiedeman to ORE 99W	$2,500,000 $2,500,000 $2,000,000 $4,800,000	RTP 6015 RTP 6014 RTP 6016 RTP 6031
Walnut Boulevard	Widen to 3 lanes between 135th (or where Gaarde connects) to ORE 99W Extend Walnut east of ORE 99W to meet Ash/Scoffins and Hunziker Streets (3 lanes)	$11,800,000 $19,000,000	RTP 6033 & 6034 Not Funded In no plans

Table 11-6 Location	Description	Cost Estimate	Funding Status*
Gaarde Street	Extend and widen to 3 lanes Walnut to ORE 99W Use access control and 2 lanes in sensitive areas	$4,000,000	RTP 6035
Hall Boulevard	Widen to 5 lanes Scholls Ferry to Locust Widen Hall south of Locust Extend south to Tualatin (3 lanes—total, both directions)	$4,700,000 $4,700,000 $25,000,000	RTP 6013 RTP 6030 RTP 6069
Durham Road	Widen to 5 lanes (total, both directions) between Hall Boulevard and Upper Boones Ferry Road. Reserve right-of-way to the west for 5 lanes	$8,000,000	RTP 6037
Durham Road/Upper Boones Ferry Road intersection	Realign intersection so that Durham Road continues on continous route to I-5/Carmen interchange—Upper Boones Ferry Road would "tee" into Durham Road/Upper Boones Ferry Road intersection	$5,000,000	RTP 6043
72nd Avenue	Widen to 5 lanes: ORE 99W to Hunziker Hunziker to Bonita Bonita to Durham	 $3,000,000 $5,000,000 $5,000,000	Tigard Triangle LID RTP 6040 RTP 6041 RTP 6042
Hunziker/Hampton	Realign Hunziker Road to meet Hampton Road at 72nd Avenue—requires overcrossing over ORE 217—removes existing 72nd Avenue/Hunziker intersection	$10,000,000	RTP 6032
Atlanta Street	Extend Atlanta Street west to meet 72nd Avenue	$2,500,000	To be funded with development in Tigard Triangle (i.e. LID)
Dartmouth Street	Widen to five lanes from ORE 99W to I-5	$750,000	RTP 6045 To be funded by fronting improvements
68th Avenue	Widen to 3-lanes between Dartmouth/I-5 Ramps and ORE 217 Extend 68th Avenue south to meet ORE 217 providing right-in/right-out only access to 68th Avenue from ORE 217, replacing the NB ramps to 72nd at ORE 217	$3,600,000 $15,000,000	Not Funded (could be partially funded by development in Tigard Triangle—ie. LID) RTP 6047
Scoffins/Hunziker/Hall intersection	Realign Scoffins to meet Hunziker at Hall	$1,000,000	Not Funded
Beef Bend Road	131st to King Arthur – 3 lanes Access Control should be implemented to preserve capacity with 2 lanes (with intersection turn lanes). Minimum 1,000 foot spacing should be used between any driveway(s) and/or public street(s) Beef Bend/Elsner from ORE 99W to Scholls Ferry Rd	$5,000,000 $500,000 $24,000,000	RTP 6059 Not Funded Implemented with adjacent development RTP 6111

Table 11-6 Location	Description	Cost Estimate	Funding Status*
Taylors Ferry Road	Extend to Oleson Road	$1,900,000	RTP 6017
Wall Street	New roadway connecting Hunziker Street and Hall Boulevard	$10,000,000	Not Funded
ORE 99W Traffic Signal System/Management	Signal interconnection from I-5 to Durham	$2,000,000	RTP 6054 & 6055
	TOTAL	**$1, 091,750,000**	

***** - RTP cost estimates and project numbers utilized where available

Table 11-7
City of Tigard Future Intersection Improvements

Table 11-7 No.	Intersection	Description	Cost Estimate
1	Davies/Scholls Ferry Road	• Traffic signal • Northbound right turn lane • Realign to meet Barrows Road	$3,230,000
2	North Dakota/125th/Scholls Ferry Road	• Southbound right turn lane • Retain westbound right turn lane when 3rd lane added on Scholls Ferry Road • Change from protected left turn phasing to permitted phasing north/south	$450,000
3	Nimbus/Scholls Ferry Road	• Retain eastbound right turn lane when 3rd lane added on Scholls Ferry Road • Retain westbound right turn lane when 3rd lane added on Scholls Ferry Road • Southbound right turn lane • Reconfigure northbound and southbound lanes to create exclusive left turn lanes • Change from split phasing to protected left turn phasing north/south	$1,150,000
4	121st/Walnut RTP 6033	• Traffic signal • Northbound left turn lane • Southbound left turn lane • Eastbound left turn lane • Westbound left turn lane	$2,150,000
5	121st/North Dakota	• Traffic signal	$150,000
6	Greenburg/Oleson/Hall	• 2nd northbound left turn lane • Extend signal cycle length • Assumes Hall widened to 5 lanes	$550,000
7	Greenburg/Washington Square Road	• Boulevard Treatment • RTP 6015	$2,500,000
8	Main/Greenburg/ORE 99W	• Southbound left turn lane • Retain westbound right turn lane when ORE 99W widened to 7 lanes	$700,000
9	Greenburg/Tiedeman	• Extend signal cycle length • Improved geometry/alignment	$2,050,000
10	Hall/Oak	• Extend signal cycle length	

Table 11-7

No.	Intersection	Description	Cost Estimate
		• Assumes Hall widened to 5 lanes	$50,000
11	Hall/ORE 99W RTP 6056	• Southbound right turn lane • Northbound left turn lane • Westbound right turn overlap • Retain westbound right turn lane when ORE 99W widened to 7 lanes	$3,700,000
12	ORE 217 NB Ramps/ORE 99W	• Retain eastbound right turn lane when ORE 99W widened to 7 lanes • Retain westbound right turn lane when ORE 99W widened to 7 lanes • 2nd northbound left turn lane	$900,000
13	ORE 217 SB Ramps/ORE 99W	• 2nd southbound right turn lane • Retain eastbound right turn lane when ORE 99W widened to 7 lanes	$400,000
14	Dartmouth/ORE 99W	• Retain eastbound right turn lane when ORE 99W widened to 7 lanes	$200,000
15	72nd/ORE 99W	• Southbound right turn lane • Northbound right turn overlap • Change to protected left turn phasing north/south • Retain eastbound right turn lane when ORE 99W widened to 7 lanes	$500,000
16	68th/ORE 99W	• 2nd westbound left turn lane • Northbound left turn lane • Southbound left turn lane • Change to protected left turn phasing north/south	$1,550,000
17	72nd/Dartmouth	• Traffic signal • Assumes 72nd Avenue and Dartmouth widened to 5 lanes	$150,000
18	68th/Atlanta/Haines	• Traffic signal	$150,000
19	ORE 217 SB Ramps/72nd	• Assumes 72nd Avenue widened to 5 lanes	Roadway Widening
20	72nd/Bonita	• 72nd Avenue widened to 5 lanes	Roadway Widening
21	72nd/Carmen	• 2nd northbound right turn lane	$200,000
22	72nd/Upper Boones Ferry Road	• Assumes Durham/Upper Boones Ferry/72nd widened to 5 lanes	$1,000,000 (Also see Table 11-6a)
23	Hall/Sattler/Ross	• Traffic signal • Northbound left turn lane • Southbound left turn lane	$1,150,000
24	Hall/Durham	• 2nd southbound left turn lane • Widen west of intersection to introduce 5-lane section on Durham (include existing westbound right turn lane)	$1,220,000
25	ORE 99W/McDonald/Gaarde	• Westbound right turn lane	$700,000

Table 11-7

No.	Intersection	Description	Cost Estimate
		• 2nd Northbound left turn lane	
26	ORE 99W/Beef Bend	• Southbound right turn lane (on ORE 99W) • Adjust cycle length	$250,000
27	Tiedeman/Walnut	• Completed •	
28	Murray/Scholls Ferry Road	• 2nd westbound right turn lane • Add additional southbound lane to achieve 2 southbound left turn lanes and two southbound through lanes • Extend signal cycle length • Changes to protected left turn phasing north/south and east/west	$800,000
29	Beef Bend/Scholls Ferry Road	• Eastbound right turn lane • Northbound left turn lane • Eastbound right turn overlap • Change to protected phasing east/west • Change to split phasing north/south	$850,000
30	Walnut/ORE 99W	• Retain westbound right turn lane when ORE 99W is widened to 7 lanes • Change to protected left turn phasing on Walnut	$250,000
31	72nd/Hampton/Hunziker	• Southbound right turn lane OR eastbound right turn lane • Change to protected left turn phasing all directions	$300,000
32	Durham/Upper Boones Ferry Road	• Reconfigure intersection to make through route between Durham and I-5/Carmen interchange	$1,000,000 (Also see Table 11-6a)
33	Gaarde/Walnut	• Traffic signal • Eastbound right turn lane	$350,000
34	68th/Dartmouth	• Traffic signal	$150,000
35	Carman/I-5 southbound	• Eastbound right turn lane	$200,000
36	Carman/1-5 northbound	• 2nd westbound through lane • 2nd northbound left turn lane • Eastbound separate through and left turn (2) lanes	$500,000
	Safety Enhancements	Several Intersections	$20,000,000
	Pedestrian Crossings	Several Locations	$8,000,000
Total Intersection Improvements			**$57,450,000**

* - Based upon tentative draft RTP preferred improvement list from Metro, reference numbers from November 1998 listing. Planned indicates projects included in the MSTIP, STIP, CIP or approved (1995) RTP funding programs. Not in Plans indicates projects that have not be previously addressed in one of the local or regional transportation improvement plans.

FINANCING ISSUES

The collective funding requirements of the Tigard TSP is outlined by mode in Table 11-8. Based upon current sources of funding, the cost of the needs far exceeds the existing funding projected over the next 20 years. It should be noted that elements of the bicycle and pedestrian project lists that are redundant to the street improvement list were deducted to avoid double counting. A small portion of this difference can be made up by land use development exactions, where unimproved frontage is built to the TSP standards as projects are implemented. A rough estimate of the potential value of fronting development exactions is about $50 million dollars over 20 years, assuming that all the unimproved frontages of roadway projects (sidewalk plus 18 feet of street) identified in this plan were exactions. This would assume that the fronting improvements would **not** be credited to TIF/SDC revenue that is already included in the existing funding outlook. The magnitude of the fronting improvements is such that the City and County will need to develop private/public partnerships to assure the reasonable delivery of future improvements in a timely manner.

Table 11-8
Costs for Tigard Transportation Plan over 20 years (2000 Dollars)

Transportation Element	**Approximate Cost**
Street Improvement Projects*: Current Plans (RTP)	$529,350,000
Unfunded/Not in Plans	$619,850,000
Signal Coordination/ITS Systems ($100,000/yr)	$2,000,000
Road Maintenance (assumes 4% per year growth)	$46,000,000
Bicycle Master Plan (Total $24,015,000)	$15,155,000
Pedestrian Action Plan (Total $19,436,000)	$12,480,000
Pedestrian/School Safety Program ($10,000/yr)	$250,000
Sidewalk Grant Program ($50,000/yr)	$1,000,000
Park-and-ride Expansion (1,000 spaces)	$2,000,000
Commuter Rail (Beaverton-Wilsonville)	$71,500,000
Neighborhood Traffic Management ($50,000/yr)	$1,000,000
TSP Support Documents (i.e., Design standard update, …)	$1,000,000
TDM Support ($25,000/yr)	$500,000
TWENTY YEAR TOTAL in 2000 Dollars	**$1,302,085,000**

* Many of these projects include multi-modal elements built with streets, such as bike lanes and sidewalks. Project costs are included here and not repeated in bicycle and pedestrian costs. While projects in the RTP do not have committed funds, they represent a level of funding that is considered likely over the next 20 years given current funding sources.

Of this total, ten projects on I-5, ORE 217, I-5/ORE 99W connector and ORE 99W (state facilities) represent about $900,000,000 of the total. The remaining projects in Tigard represent about $400,000,000.

The funding sources, which can be used for various modes of transportation are summarized in Table 11-9. Historically, funding sources have been developed to support roadways for automobiles. Few funding sources have been allocated to other travel modes. Other travel modes were commonly implemented as an element of a roadway project, if funded at all. A few funding sources that the City receives for other modes include an allocation of the state motor vehicle fees which come to the City being dedicated to pedestrian/bicycle paths (about $24,000 per year) and a small set aside of the MSTIP funds for bikeways (about $20,000 per year). While federal gas tax funds are specifically allocated to multi-modal and balanced investments in transportation, other sources of funds such as state gas tax cannot be used for anything but highway use. To address these other modes the City will need to specifically seek funds for a balanced transportation system, while managing the overall needs and revenues.

Table 11-9
Fund Source by Project Type

Source	Bicycle	Pedestrian	Streets	Maintenance	Transit
Traffic Impact Fee (TIF) System Development Charges (SDC)	•	•	✓		
Gas Tax/Motor Vehicle Fees					
STATE	•	•	✓	✓	
FEDERAL	✓	✓	✓	✓	✓
Street Utility Fees				✓	
Exaction's	•	✓	✓		
Local Improvement Districts (LID)	•	•	✓		
Tax Increment Financing	✓	✓	✓		
Special Assessments		•	✓	✓	✓
Driveway Fees			✓	✓	
Payroll Employee Tax					✓
Oregon Special Public Works Fund	•	•	✓		✓

• Typically as part of roadway project where other modes are incorporated
✓ Used as a primary source of funding

Current transportation revenue for the City of Tigard is summarized in Table 11-10. Presuming a constant funding level for 20 years, this would potentially fund about $250,000,000 of transportation projects (maintenance, operation, construction). As a comparison to this number, the amount of regional funding allocated to transportation projects in Tigard was calculated using the RTP constrained funding scenario. Approximately $150 million of transportation projects have been identified in the current funding programs.[2] While these numbers are not exactly the same (the numbers from Table 11-10 include all City and local funding sources), they clearly point out that there is a serious shortfall between the cost of the transportation plan and the current funding sources. The transportation plan costs of $1.3 billion are much greater than the best case revenue scenario of about $250 million using existing funding sources. While fronting improvements and exactions have the potential to be roughly $120 million in the best scenario, this leaves a billion dollar gap between needs and reasonably expected revenue.

Table 11-10
Estimation of Available Transportation Funding From Existing Sources
2000 Dollars (approximate)

Source	Approximate Annual Revenue
State Motor Vehicle Fees to City	$1,500,000
County Gas Tax to City	$100,000
TIF to City	$1,200,000
MSTIP with City (approximate)	$2,000,000
State/Federal Fees use in City (approximate, assuming 30% capital allocation)	$5,000,000
ANNUAL TOTAL	**$9,800,000**
20 YEAR Tigard Transportation Bond Potentail	**$50,000,000**
20 YEARS OF CURRENT FUNDING	**$250,000,000**

Exploring Funding Concepts

The gap between transportation plan costs and existing revenue sources creates the need to explore several other concepts. Several options are outlined below:

A. **Reduce the transportation plan costs.** This can eliminate funding shortfalls by deferring or eliminating projects. While some cost reduction is expected in the normal implementation of transportation projects of this size, to meet the total funding shortfall by this strategy would have negative impacts. Lower service levels for all modes of transportation, more extensive congestion, and impacts on community livability would be expected. Depending how much of the plan is eliminated (assuming land use forecasts occur), this strategy could negatively impact the economic potential of Tigard (businesses relocate, people move out and development does not reach modified 2015 forecasts). Additionally, by deferring capital costs of significant projects outside of 20 years it can be expected that the same projects will cost multiples of their estimated costs in the short term. This is similar to deferring roadway maintenance and paying 4 to 5 times the cost of the same improvement by waiting years into the future to act. Rising land costs and the development of vacant land adjacent to roadways, which increases mitigation requirements (dealing with hundreds of residents rather than one

[2]Interim Federal Regional Transportation Plan, Metro, July 1995, Table 7-2.

landowner). Additionally changing water quality/detention needs with Salmon legislation result in higher project costs with time. These increases in cost erode transportation dollars, making deferral of transportation system improvements an unwise choice in managing the public interest.

B. **Build alternative mode projects and eliminate costly road projects.** This strategy is commonly discussed by people as a way to "get people out of their cars". However, the overall future need for transportation in Tigard results from the majority of people using motor vehicles (single occupant vehicles and carpool/vanpools). By not building road projects, the resulting congestion would severely impact bus transit, bicycle and pedestrian travel which all use the same streets as automobiles. The forecast increase in PM peak hour vehicle use in Tigard (about 7,000 to 15,000 additional vehicle trips in 20 years is 5 to 7 times the total existing Tri-Met bus ridership in Tigard. While transit will play a significant role in reducing motor vehicle trips, it is unlikely it could eliminate the need for the majority of roadway projects.

C. **Increase gas tax to meet TSP needs.** The gas tax, although assumed to be the major transportation funding element is one of many sources of funds. It is primarily used to maintain the transportation system not build new local street system capacity. Presently, the state gas tax generates about $2.5 million per year in revenue for the city and the county one cent gas tax generates about $100,000 per year for the city. If all the motor vehicle fees of the state, county and city were increased proportionately to ***by themselves*** fund the Tigard transportation (less ODOT projects) shortfall, it would require an increase of over $0.40 per gallon of gasoline in Tigard. Major increases to motor vehicle fees of this type would likely require voter approval. This amount of gas tax increase by itself would not be reasonable today, and points to the fact that funding will need to be from a variety of sources, not just one fee.

D. **Make development pay for all the difference in future transportation needs since they are caused by growth.** If all the excess funds for Tigard improvements (less ODOT projects) were divided by the increment of trips between 1997 and the year 2015 and Tigard was responsible for the total cost of improvements it would require $8,000 per evening peak trip would need to be charged to all development on top of all existing fees, taxes and exactions. This would double the current TIF by just adding on Tigard's needs. An increase of this type would impact the economic development potential of Tigard since other cities (or states) may not have similar charges. Additionally, many of the transportation projects identified in the TSP serve **existing and** future users. For example, a roadway connection project with sidewalks and bicycle lanes (such as Walnut Street) is beneficial to all system users. This approach would unfairly impose the entire responsibility of TSP implementation on development. Additionally, some improvements are needed even if no growth were to occur, creating a need to fund at least some transportation improvements by other means.

E. **Do not allow land development unless all transportation needs can be funded.** This concept is known as concurrency. This has been implemented in various forms through level of service code amendments required by state laws (Florida and Washington). The examples over the last 15 years of these policies is clear. Funding policy redirects itself to fix capacity problems. Transit, pedestrian, bicycle and other mode facilities are generally not based on capacity but connectivity and access. The outcome in these communities is always larger

roads - from Clark County, Washington to Contra Costa County, California to Boward County, Florida. A balanced transportation system is difficult to develop under concurrency assumptions. Outright development moratoria based upon transportation are difficult to impose given Oregon Planning and property rights laws. Creating extraordinary requirements for development would impact economic vitality and likely move the problem rather than fix it. ODOT has taken positions recently that have opposed rezoning of land if state facilities do not have adequate capacity and funding is not programmed. This is similar to concurrency. It blends assumptions that Comprehensive Plan land uses could be adequately served and that all new/additional vehicle trips are bad for the transportation system. Again, the linkage of concurrency in any form, no matter how simple or appealing, does not produce the most effective or efficient transportation system. This approach defers improvements increasing their eventual cost of implementation. It is a reactive policy, not a progressive plan to reduce overall transportation system costs.

F. **Use bonds to fund transportation needs.** Bonds are commonly used for financing transportation projects (the Westside LRT project property tax levy uses tax receipts to fund bond payments to fund the project). The use of public bonds would require a vote of the public. This type of program would include a list of transportation projects that would be funded and a general time frame for completion. Based upon an estimate of property value in Tigard, the funding gap would require an increase in property tax approximately $500 per year over 20 years for a homeowner of a $200,000 home. If all the transportation improvement in the Tigard area were pass on via bonds to Tigard property owners it would represent over $2,000 per year to a $200,000 home. Because increases to property tax are not generally viewed positively by the public, an extensive public involvement effort would be necessary to coordinate the understanding of need, the extent that the bonds should fund transportation needs and what the actual program elements would include.

In studying various strategies, it is clear a "one size fits all" plan will not succeed. It is recommended that a diversified and pragmatic strategy be developed that reflects political realities, economic needs, community livability and a balanced transportation system. Since transportation funding is not controlled locally, it will require steps to be taken at the state, regional, county and city level to be effective and fair. The following steps are necessary to implement the Tigard TSP.

- Prioritize all transportation projects in Tigard so that the Regional Transportation Plan includes the projects of greatest need. The other projects should be included in preferred and strategic project lists to be eligible to compete for future regional funding. Additionally, as conditions change in the future the need for certain projects may change.

- Use the priority listing to create City of Tigard transportation bond measures – this would have the potential to fund $50 to $100 million over 20 years. The current bond measure would be part of this implementation step.

- Start with funding the highest priority TSP needs on the anticipation that over the next 20 years, new and complementary funding programs will be developed. This is more pragmatic than presuming all projects must have funding commitments today and accommodates changing needs and priorities over time. It is important not to stop everything today until a plan to fully fund all the transportation needs approved. Over time policies and programs in the plan which are intended to reduce vehicle demand can mature and new technologies that improve transportation

efficiency can evolve that may change how much or when funding becomes needed.

- Given the relative size of a gas tax increase to fund transportation improvements in Tigard, a more diverse source of state and regional funding will be needed. Assuming that funding shortfalls can best be paid by gas tax statewide ignores the fact that the rest of the state may not share Tigard's or the Portland region's need to fund transportation. Three steps can be taken including:

  Statewide: Support gradual and incremental increases to the state gas tax are made (about $0.06 to $0.10 per gallon each six to eight years (assumes three increases in 20 years). Support statewide collection and proportional increases to truck fees (presently weight-mile tax and diesel tax in other states).

  Regionally: Support increases to motor vehicle registration and air quality surcharges (payable every two years at DEQ inspection or upon sale of vehicle based upon actual miles driven). These relate the urban needs and problems. However, if air quality improves the nexus of higher fees may be difficult.

  County: Update the TIF to better reflect arterial and collector needs in the county. Credits and fronting improvements will need to be reevaluated, particularly with more and more potential for redevelopment. It can almost be assured that TIF's would need to be increased given the county wide transportation needs. In addition, a program similar to the MSTIP where a property tax levy is used to fund the most significant projects in Tigard (or regionally, as in Washington County) could be done over the next 20 years, potentially funding up to a quarter to a half of the funding shortfall. Additionally, county gas tax and vehicle registration fees could be increased or created.

- Maximize the use of funding sources from smaller pedestrian and bicycle projects. Over a twenty year period the following funding sources could generate a few million dollars which is significant for those modes of travel:

  1. Obtain planning assistance money from the Transportation/Growth Management Program. This could include project grants or planning assistance through "Quick Response" teams. The TGM program is administered by ODOT/DLCD.
  2. ODOT's Bicycle and Pedestrian Program administers two grant programs to assist in the development of walking and bicycling options. Local grants up to $100,000 are shared 80% state/20% local can be useful in filling gaps.
  3. The Oregon Livability Initiative could be a source of funds for further commuter rail planning to Yamhill County.
  4. TEA-21 Congestion Mitigation Air Quality Improvement Program is a source of funds administered by Metro that provides a regional source of money for smaller pedestrian/bicycle projects.

- At a city level, consider needed city code/charter changes to allow broad use of local improvement districts, area SDC's and bond measures to fund elements of the transportation plan. One of the toughest problems for development of concurrency are initial costs for street improvements. Tax increment financing commonly used for redevelopment has nearly been discontinued by public agencies due to tax reduction measures. Tax increment refers to selling bonds to pay for infrastructure that are paid off by the net income of increased tax revenues

created by increased property value. Tax increment financing can be very effective in district level master plans or redevelopment.

- Another bonding concept requiring legislative change, would be to bond sidewalk/fronting improvements in already-developed areas with net proceeds tied to the title on the land such that upon transfer or resale the city is paid back, including interest. Current property owners would benefit from the improvements and could pay off the assessment earlier at their discretion. The city would need to front and back the bonds and if over the bond life resale/transfer does not occur the city would be responsible. Given that the great majority of homes change ownership over 20 years the risks should be minimal. This concept requires further study and legislative review before testing the application.

- Using the development review process to protect the needed right-of-way in the next twenty years to meet transportation system demands is another possible tool. This can reduce the ultimate cost of street improvements. This requires an analysis process (build out assessment or frequent updates) to stay current of future right-of-way needs based upon changing land use (for example, three lanes in 2015 may need to be 5 lanes in 2025). Also known as a corridor set back strategy, this approach helps preserve long term right-of-way needs.

- Develop funding programs (using new motor vehicle fees or other funding sources) to encourage private/public cooperation in funding transportation improvements. This may take several forms and will require more assessment. One example would be establishing a city funding source that can be matched with private funding sources to implement elements of the TSP.

- Roadway pricing strategies may become necessary for the large deficit in ODOT projects in not only the Tigard area, but the Portland region. While tolls would not represent the full deficit, they would (like all the above measures) contribute to funding the needed transportation system. Any road pricing strategy would not be predicated upon past “toll booth” approaches, but would be built on new technology that would not require people to stop and pay (automatic vehicle identification and debiting).

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8. TRANSPORTATION

This chapter addresses Statewide Planning Goal #12:

> Transportation which requires local jurisdictions "to provide and encourage a safe, convenient and economic transportation system."

Transportation planning has been defined as "...the process by which transportation improvements or new facilities are systematically conceived, tested as to present and future adequacy, and programmed for future construction. Modern transportation planning emphasizes the total transportation system. It considers all modes of transport which are economically feasible to a state, region or urban area." (Goodman & Freund, Principals and Practices of Urban Planning, "Transportation Planning")

The transportation plan for Tigard reaches beyond the Tigard Planning Area and includes traffic and transportation impacts within other areas of the southwest subregion of the Portland Metropolitan Area. ~~The Metropolitan Service District (MSD)~~ METRO acts as the regional coordinator for transportation planning throughout the Portland Metropolitan Area. The other major service district impacting Tigard is Tri-Met which is charged with the responsibility for providing public transportation throughout the metropolitan area.

The Comprehensive Plan proposes a land use plan that encourages and facilitates balanced transportation development for the City. The plan recognizes that land use and transportation investments are interconnected and that relationship should be reinforced to produce an acceptable urban environment.

Detailed historical information concerning transportation in the Tigard Urban Planning Area is available in the "Comprehensive Plan Report: Transportation." Detailed current information is available in the 2001 Tigard Transportation System Plan.

The 2001 Tigard Transportation System Plan updates the comprehensive plan and policies. However, it does not fully replace all elements of the comprehensive plan adopted prior to the 2001 TSP. For this reason, a new Section has been added to the beginning of the Transportation Policies Section to encompass the system wide changes developed as part of the TSP process. Some of this information is repeated and expanded upon in other policy sections. Where a policy or implementation strategy specifically conflicts with the updated TSP, the specific policy or implementation strategy has been deleted.

8.1 TRANSPORTATION SYSTEM

Findings

- Much of the traffic within Tigard is through traffic with origins and destinations outside of Tigard. There are no reasonable alternate routes for the 99W corridor traffic.

- There are 22 intersections near or at capacity based on the 2001 Tigard Transportation System Plan.

- There is no continuous bicycle network in Tigard.

- There are significant gaps in the sidewalk system with few interconnected locations linking to schools, retail, parks and transit.

- Segments of Highway 217 and I-5 are over capacity and ORE 99W will continue to serve more through traffic in the future.

- Future traffic models indicate ORE 99W and half of the signalized traffic intersections fail within 20 years assuming no improvements are made.

- Travel time data on Highway 217 indicates that some of the slowest travel speed on the facility occurs in Tigard due to existing capacity issues and the need for interchange improvments.

- In the development of the transportation system plan, seven goals were identified which were used as the guidelines for the development of the policies and implemenation strategies. The goals were: livibility, balanced transportation system, safety, performance, accessibility, goods movement, and coordination.

POLICIES

8.1.1 PLAN, DESIGN AND CONSTRUCT TRANSPORTATION FACILITIES IN A MANNER WHICH ENHANCES THE LIVABILITY OF TIGARD BY:

A. PROPER LOCATION AND DESIGN OF TRANSPORTATION FACILITIES.

B. ENCOURAGING PEDESTRIAN ACCESSIBILITY BY PROVIDING SAFE, SECURE AND DESIRABLE PEDESTRIAN ROUTES.

C. ADDRESSING ISSUES OF EXCESSIVE SPEEDING AND THROUGH TRAFFIC ON LOCAL RESIDENTIAL STREETS THROUGH A NEIGHBORHOOD TRAFFIC PROGRAM. THE PROGRAM SHOULD ADDRESS CORRECTIVE MEASURES FOR EXISTING PROBLEMS AND ASSURE THAT DEVELOPMENT INCORPORATES TRAFFIC CALMING.

8.1.2 PROVIDE A BALANCED TRANSPORTATION SYSTEM, INCORPORATING ALL MODES OF TRANSPORTATION (INCLUDING MOTOR VEHICLE, BICYCLE, PEDESTRIAN, TRANSIT AND OTHER MODES) BY:

A. THE DEVELOPMENT OF AND IMPLEMENTATION OF PUBLIC STREET STANDARDS THAT RECOGNIZE THE MULTI-PURPOSE NATURE OF THE STREET RIGHT-OF-WAY FOR UTILITY, PEDESTRIAN, BICYCLE, TRANSIT, TRUCK AND AUTO USE.

B. COORDINATION WITH TRI-MET, AND/OR ANY OTHER TRANSIT PROVIDERS SERVING TIGARD, TO IMPROVE TRANSIT SERVICE TO TIGARD. FIXED ROUTE TRANSIT WILL PRIMARILY USE ARTERIAL AND COLLECTOR STREETS IN TIGARD. DEVELOPMENT ADJACENT TO TRANSIT ROUTES WILL PROVIDE DIRECT PEDESTRIAN ACCESSIBILITY.

C. CONSTRUCTION OF BICYCLE LANES ON ALL ARTERIALS AND COLLECTORS WITHIN TIGARD CONSISTENT WITH THE BICYCLE MASTER. ALL SCHOOLS, PARKS, PUBLIC FACILITIES AND RETAIL AREAS SHALL STRIVE TO HAVE DIRECT ACCESS TO A BIKEWAY.

D. CONSTRUCTION OF SIDEWALKS ON ALL STREETS WITHIN TIGARD. ALL SCHOOLS, PARKS, PUBLIC FACILITIES AND RETAIL AREAS SHALL STRIVE TO HAVE DIRECT ACCESS TO A SIDEWALK.

E. DEVELOPMENT OF BICYCLE AND PEDESTRIAN PLANS WHICH LINK TO RECREATIONAL TRAILS.

F. DESIGN LOCAL STREETS TO ENCOURAGE A REDUCTION IN TRIP LENGTH BY PROVIDING CONNECTIVITY AND LIMITING OUT-OF-DIRECTION TRAVEL AND PROVIDE CONNECTIVITY TO ACTIVITY CENTERS AND DESTINATIONS WITH A PRIORITY FOR BICYCLE AND PEDESTRIAN CONNECTIONS.

G. TIGARD WILL PARTICIPATE IN VEHICLE TRIP REDUCTION STRATEGIES DEVELOPED REGIONALLY TARGETED TO ACHIEVE NON-SINGLE OCCUPANT VEHICEL LEVELS OUTLINED IN TABLE 1.3 OF THE REGIONAL TRANSPORTATION PLAN.

H. TIGARD WILL SUPPORT THE DEVELOPMENT OF A COMMUTER RAIL SYSTEM AS PART OF THE REGIONAL TRANSIT NETWORK.

8.1.3 STRIVE TO ACHIEVE A SAFE TRANSPORTATION SYSTEM BY THE DEVELOPMENT OF STREET STANDARDS, ACCESS MANAGEMENT POLICIES AND SPEED CONTROLS WHEN CONSTRUCTING STREETS, AND BY MAKING STREET MAINTENANCE A PRIORITY AND THROUGH A COMPREHENSIVE PROGRAM OF ENGINEERING, EDUCATION AND ENFORCEMENT.

A. DESIGN OF STREETS SHOULD RELATE TO THEIR INTENDED USE.

B. DESIGN SAFE AND SECURE PEDESTRAIN AND BIKEWAYS BETWEEN PARKS AND OTHER ACTIVITY CENTERS IN TIGARD.

C. DESIGNATE SAFE AND SECURE ROUTES TO SCHOOLS FOR EACH SCHOOL. ANY NEW RESIDENTIAL PROJECT SHOULD IDENTIFY THE SAFE PATH TO SCHOOL FOR CHILDREN

D. REFINE AND MAINTAIN ACCECSS MANAGEMENT STANDARDS FOR ARTERIAL AND COLLECTOR STREETS TO IMPROVE SAFETY IN TIGARD.

E. ESTABLISH A CITY MONITORING SYSTEM THAT REGULARLY EVALUATES, PRIORITIZES AND MITIGATES HIGH ACCIDENT LOCATIONS WITHIN THE CITY.

F. NEW ROADWAYS SHALL MEET APPROPRIATE LIGHTING STANDARDS. EXISTING ROADWAYS SHALL BE SYSTEMATICALLY RETROFITTED WITH ROADWAY LIGHTING.

H. REQUIRE NEW DEVELOPMENT TO PROVIDE SAFE ACCESS TO AND TO GAIN SAFE ACCESS FROM~~ABUT~~ A PUBLICALLY DEDICATED AND IMPROVED STREET (I.E. DEDICATE RIGHT-OF-WAY, IF NOT ALREADY ON A PUBLIC STREET, AND INSTALL IMPROVEMENTS IN ROUGH PROPORTIONALITY TO THE DEVELOPMENT'S IMPACT) AND PROVIDE SAFE ACCESS.

8.1.4 SET AND MAINTAIN TRANSPORTATION PERFORMANCE MEASURES THAT:

A. SET A MINIMUM INTERSECTION LEVEL OF SERVICE STANDARD FOR THE CITY OF TIGARD AND REQUIRES ALL PUBLIC FACILITIES TO BE DESIGNED TO MEET THIS STANDARD.

B. SET PARKING RATIOS TO PROVIDE ADEQUATE PARKING, WHILE PROVIDING AN INCENTIVE TO LIMIT THE USE OF THE SINGLE OCCUPANT VEHICLE.

C. ENCOURAGE WORKING WITH OTHER TRANSPORTATION PROVIDERS IN WASHINGTON COUNTY, INCLUDING TRI-MET, METRO AND ODOT TO DEVELOP, OPERATE AND MAINTAIN INTELLIGENT TRANSPORTATION SYSTEMS, INCLUDING COORDINATION OF TRAFFIC

8.1.5 DEVELOP TRANSPORTATION FACILITIES WHICH ARE ACCESSIBLE TO ALL MEMBERS OF THE COMMUNITY AND MINIMIZE OUT OF DIRECTION TRAVEL BY:

A. THE DESIGN AND CONSTRUCTION OF TRANSPORTATION FACILITIES TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

B. THE DEVELOPMENT OF NEIGHBORHOOD AND LOCAL CONNECTIONS TO PROVIDE ADEQUATE CIRCULATION IN AND OUT OF THE NEIGHBORHOODS.

C. WORK WITH WASHINGTON COUNTY AND ODOT TO DEVELOP AN EFFICIENT ARTERIAL GRID SYSTEM THAT PROVIDES ACCESS WITHIN THE CITY, AND SERVES THROUGH CITY TRAFFIC.

8.1.6 PROVIDE FOR EFFICIENT MOVEMENT OF GOODS AND SERVICES THROUGH THE DESIGN OF ARTERIAL ROUTES, HIGHWAY ACCESS AND ADJACENT LAND USES IN WAYS THAT FACILITATE THE EFFICIENT MOVEMENT OF GOODS AND SERVICES AND THE SAFE ROUTING OF HAZARDOUS MATERIALS CONSISTENT WITH FEDERAL AND STATE GUIDELINES.

8.1.7 IMPLEMENT THE TRANSPORTATION SYSTEM PLAN (TSP) IN A COORDINATED MANNER BY COORDINATING AND COOPERATING WITH ADJACENT AGENCIES (INCLUDING WASHINGTON COUNTY, BEAVERTON, TUALATIN, LAKE OSWEGO, CITY OF PORTLAND, TRI-MET, METRO AND ODOT) WHEN NECESSARY TO DEVELOP TRANSPORTATION PROJECTS WHICH BENEFIT THE REGION AS A WHOLE IN ADDITION TO THE CITY OF TIGARD.

IMPLEMENTATION STRATEGIES

1. Design streets and highways to respect the characteristics of the surrounding land uses, natural features, and other community amenities.

2. ~~The City will d~~Develop and maintain a pedestrian plan in Tigard, outlining pedestrian routes. ~~Sidewalk standards will be d~~Develop~~ed~~ sidewalk standards to define various widths, as necessary, for City street types.

3. Develop and maintain a program of street design standards and criteria for neighborhood traffic management (NTM) for use in new development and existing neighborhoods. Measures to be developed may include (but are not limited to) narrower streets, speed humps, traffic circles, curb/sidewalk extensions, curving streets, diverters and/or other measures, as developed as part of a City NTM plan.

4. Develop and maintain a series of system maps and design standards for motor vehicles, bicycle, pedestrian, transit and truck facilities in Tigard.

5. The Regional Transportation Plan (RTP) and Tri-Met service plans will be the guiding documents for development of Tigard's transit plan. The City should provide input to Tri-Met regarding their specific needs as they annually review their system. This input should focus on improving service (coverage and frequency) to under-served areas. New transit service should be considered concurrent to street improvements when significant street extensions are completed. The City should encourage land intensive uses to locate near transitways and require high intensity uses (i.e. large employment, commercial sites) to provide transit facilities. When bus stops reach 75 boardings per day, bus hselters should be considered in development review. Sidewalks should be available within ¼ mile from all transit routes and transit should be provided to schools and parks.

6. Develop a bicycle plan which connects key activity centers (such as schools, parks, public facilities and retail areas) with adjacent access. Standards for bicycle facilities within Tigard will be developed and maintained. Where activity centers are on local streets, connections to bicycle lanes shall be designated.

7. Develop a pedestrian plan which connects key activity centers with adjacent access. Require sidewalks to be constructed on all streets within within Tigard.

8. Standards for pedestrian facilities within Tigard will be developed and maintained.

9. The bicycle and pedestrian plans will need to indicate linkages between recreational and basic pedestrian networks. A primary facility in Tigard should link together Fanno Creek, Tualatin River and the BPA right-of-way in the west of Tigard. Design standards for recreational elements will need to be developed and maintained.

10. Revise the Code to require new streets built to provide connectivity to incorporate traffic management design elements, particularly those which inhibit speeding. As a planning standard, require local streets to have connections every 530 feet in planning local and neighborhood streets. The purpose of this policy is to provide accessibility within Tigard, with a focus on pedestrian connectivity. Pedestrian connectivity can be provided via pedestrian/bike paths between cul-de-sacs and/or greenways where auto connectivity does not exist or is not feasible.

11. Support development of a commuter rail system connecting the south Metro area to the Beaverton/Hillsboro area, with stop(s) in Tigard.

12. A functional classification system shall be developed for Tigard which meets the City's needs and respects needs of other agencies (Washington County, Metro, ODOT). Appropriate design standards for these roadways will be developed by the appropriate jurisdiction.

13. Place a high priority on routine street maintenance to preserve its infrastructure investment and improve safety.

14. Undertake a process of defining school routes for pedestrians by working with the School District, citizens and developers.

15. Develop guidelines to provide access control standards and apply these standards to all new road construction and new development. For roadway reconstruction, existing driveways shall be compared with the standards and a reasonable attempt shall be made to comply (consolidating driveway accesses or relocating driveways to a lower classification street are examples).

16. Develop a process to review traffic accident information regularly to systematically identify, prioritize and remedy safety problems. Working with the County, develop a list of high collision sites and projects necessary to eliminate such problems. Require development applications to identify and mitigate for high collision locations if they generate 10% increase to existing traffic on an approach to a high collision intersection. Washington County's SPIS (Safety Priority Indexing System) could be used as a basis for determining high collision locations.

17. Include paths to schools, parks, and town center areas as priority roadway lighting locations.

18. Require development to provide right-of-way (if needed) and safe access as determined by application of the City's development code and standards for design. Require that the minimum City standards be met for half-street adjacent to developing property for a development to proceed (with consideration of rough proportionality). Apply this policy to both pedestrians and motor vehicles.

19. Monitor Metro and Washington County's current work to develop a level of service standard. Level of service ~~D~~E (and demand-to-capacity ratio of 1.0 or less), Highway Capacity Manual, Chapters ~~9, 10 and 11~~15, 16, and 17 (or subsequent updated references) is recommended to balance provision of roadway capacity with level of service and funding. ODOT, Metro and Washington County performance standards should be considered on state or County facilities and for 2040 Concept Areas (as defined in Table 1.2 of the RTP). ~~Special districts may be designated where the citywide level of service standard is not feasible (i.e. ORE 99W)~~. The City will work to make the arterial & collector street systems operate effectively to discourage "cut-through" traffic on neighborhood and local streets.

20. Work toward the eventual connection of streets identified on the Transportation plan map as development occurs, as funds are available and opportunities arise.

21. As outlined in Title 6 of the Metro Urban Growth Management Functional Plan, develop access connection standards. The arterial street system should facilitate street and pedestrian connectivity.

22. Work with federal agencies, the Public Utility Commission, the Oregon Department of Energy and ODOT to assure consistent laws and regulations for the transport of hazardous materials.

23. Maintain plan and policy conformance to the Regional Transportation Plan and Transportation Planning Rule (OAR 660-012). Seek compatibility with all adjacent county and city jurisdiction plans.

8.~~1~~ 2 TRAFFICWAYS

Findings

- A need exists to place all of the existing public local and collector streets in the Tigard City Limits under the City's jurisdiction.

- According to a Washington County computer study 48-60% of Tigard residents work outside of the Washington County area.

- Between 77-83% of Tigard residents commute to work by auto as single occupants.

- Major congestion problems within the City have resulted from the rapid population growth since 1970, creating a need for major street improvements.

- A corridor study for Pacific Highway (99W) has not been prepared by ~~MSD~~Metro. It is the only major trafficway within the region which has not been studied. Pacific Highway, the major trafficway through the City, has the highest traffic volumes, congestion and accident[s] rates within the City. There is a need to prepare a corridor study for Pacific Highway. The City, Metropolitan Service District and [the] State should coordinate such a study.

- Many of the streets in Tigard are dead-ended which adds to the congestion on existing completed streets. Therefore, a number of street connections need to be constructed.

- A major concern of the community regarding transportation is the need to maintain and improve the livability of residential areas in the face of increasing population and transportation requirements.

- The City needs to develop a strategy to coordinate public street improvements with private sector improvements to achieve the most effective use of the limited dollars available for road development and improvement.

- Major residential growth during the planning period is expected to occur in the westerly and southerly areas of Tigard. Both of these areas lack adequate improved trafficways.

- A need exists during the planning period to complete a collector street system between Scholls Ferry Road, Walnut Street, Gaarde Street, Bull Mountain Road and Pacific Highway. The location of these connections needs to be coordinated between the City, County, State and [the] Metropolitan Service District.

- A need exists to complete the collector street system within the Tigard Triangle area to make more of this area accessible to developers, employers and employees.

POLICIES

8.~~1~~2.1 THE CITY SHALL PLAN FOR A SAFE AND EFFICIENT STREET AND ROADWAY SYSTEM THAT MEETS CURRENT NEEDS AND ANTICIPATED FUTURE GROWTH AND DEVELOPMENT.

8.~~1~~2.2 THE CITY SHALL PROVIDE FOR EFFICIENT MANAGEMENT OF THE TRANSPORTATION PLANNING PROCESS WITHIN THE CITY AND THE METROPOLITAN AREA THROUGH COOPERATION WITH OTHER FEDERAL, STATE, REGIONAL AND LOCAL JURISDICTIONS.

8.~~1~~2.3 THE CITY SHALL REQUIRE AS A PRECONDITION TO DEVELOPMENT APPROVAL THAT:

a. DEVELOPMENT ABUT A PUBLICLY DEDICATED STREET OR HAVE ADEQUATE ACCESS APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY;

b. STREET RIGHT-OF-WAY BE DEDICATED WHERE THE STREET IS SUBSTANDARD IN WIDTH;

c. THE DEVELOPER COMMIT TO THE CONSTRUCTION OF THE STREETS, CURBS AND SIDEWALKS TO CITY STANDARDS WITHIN THE DEVELOPMENT;

d. INDIVIDUAL DEVELOPERS PARTICIPATE IN THE IMPROVEMENT OF EXISTING STREETS, CURBS AND SIDEWALKS TO THE EXTENT OF THE DEVELOPMENT'S IMPACTS;

e. STREET IMPROVEMENTS BE MADE AND STREET SIGNS OR SIGNALS BE PROVIDED WHEN THE DEVELOPMENT IS FOUND TO CREATE OR INTENSIFY A TRAFFIC HAZARD;

f. TRANSIT STOPS, BUS TURNOUT LANES AND SHELTERS BE PROVIDED WHEN THE PROPOSED USE OF A TYPE WHICH GENERATES TRANSIT RIDERSHIP;

g. PARKING SPACES BE SET ASIDE AND MARKED FOR CARS OPERATED BY DISABLED PERSONS AND THAT THE SPACES BE LOCATED AS CLOSE AS POSSIBLE TO THE ENTRANCE DESIGNED FOR DISABLED PERSONS; AND

h. LAND BE DEDICATED TO IMPLEMENT THE BICYCLE/PEDESTRIAN CORRIDOR IN ACCORDANCE WITH THE ADOPTED PLAN.

~~8.1.4 WHEN THE ACTUAL ROUTES OF FUTURE TRANSPORTATION IMPROVEMENTS HAVE NOT BEEN DETERMINED, THE CITY SHALL DESIGNATE STUDY AREAS ON THE COMPREHENSIVE PLAN~~

~~TRANSPORTATION MAP AND PROVIDE GENERAL PROJECT DESCRIPTIONS TO:~~

~~a. IDENTIFY THE APPROXIMATE AREAS WITHIN WHICH THESE PROJECTS WILL OCCUR, AND;~~

~~b. TO EXPLAIN THE TYPE AND EXTENT OF THESE FUTURE IMPROVEMENTS.~~

~~8.1.5 WHEN REVIEWING DEVELOPMENT APPLICATIONS WITHIN COMPREHENSIVE TRANSPORTATION PLAN MAP STUDY AREAS, THE CITY SHALL WORK WITH APPLICANTS TO AVOID CONFLICT WITH THE LOCATION OF FUTURE TRANSPORTATION IMPROVEMENTS.~~

8.~~1~~2.6 A CHANGE IN ROADWAY CLASSIFICATION, OR LOCATION SHALL REQUIRE AN AMENDMENT TO THE COMPREHENSIVE PLAN TRANSPORTATION MAP, ~~AND; WHEN THE LOCATION OF ALL OR A PORTION OF A ROADWAY WITHIN A TRANSPORTATION MAP STUDY AREA HAS BEEN DETERMINED~~, THE MAP WILL BE AMENDED BY~~:~~

~~a.~~ DESIGNATING THE LOCATION OF THE ROADWAY AND~~.~~

~~b.~~ DESIGNATING ITS CLASSIFICATION. ~~, AND;~~

~~c. DELETING THE APPROPRIATE PORTION OF THE STUDY AREA INVOLVED.~~

8.~~1~~2.7 THE CITY SHALL SUPPORT THE GOALS AND OBJECTIVES OF THE OREGON DEPARTMENT OF TRANSPORTATION TO IMPROVE TRAFFIC FLOW AND CAPACITY AT THE INTERCHANGE OF I-5 AND HIGHWAY 217/KRUSE WAY. HOWEVER, THE CITY RETAINS THE PREROGATIVE TO REVIEW, COMMENT AND CONCUR WITH THE ACTUAL ALIGNMENTS OF THE PROJECT.

8.~~1~~2.8 THE CITY SHALL ADOPT THE FOLLOWING TRANSPORTATION IMPROVEMENT STRATEGY IN ORDER TO ACCOMMODATE PLANNED LAND USES IN THE TIGARD TRIANGLE:

a. Highway 99W should be widened to 6 lanes throughout the study area (tool box). This improvement should be constructed in the short term. In the event that widening Highway 99 to six lanes is prohibitive due to physical constraints, the Dartmouth extension could potentially provide needed northeast-to-southwest travel demand.

b. 72nd Avenue should be widened to four lanes with left turn lanes at major intersections and the Hunziker/Hampton overcrossing should be constructed. These two improvements will provide additional roadway capacity for circulation within the Triangle and for access to and from the triangle via 72nd Avenue. Construction of the Hunziker/Hampton overcrossing would have the

additional advantages of eliminating geometric deficiencies at the Highway 217/72nd Avenue interchange; thereby providing further additional capacity at this interchange. For the buildout scenario (2015), these improvements will provide adequate capacity in the vicinity of the Highway 217/72nd Avenue interchange.

c. The Hampton/Hunziker connection is only justified based on its operational relief to the 72nd interchange. Further study should be conducted to examine alternative measures to relieve this situation in a more cost effective way. Further study may indicate that extending Hampton further southwesterly (to connect with Hall Boulevard in the vicinity of McDonald Street) may better accommodate projected travel demand. Short of constructing this structure, a direct ramp instead of a loop ramp from southbound 72nd Avenue to northbound Highway 217 would provide additional capacity in the vicinity of the Highway 217/72nd Avenue interchange.

d. Access from Dartmouth to northbound Highway 217 is critical to Tigard Triangle traffic circulation, therefore, it should be studied as part of the Highway 217 corridor analysis to be performed by ODOT and Metro. Under existing conditions, there is significant roadway congestion near the Highway 99W/Highway 217 interchange. Construction of the Dartmouth Extension and access to northbound Highway 217 would mitigate congestion at this interchange because motorists in this area of the Tigard Triangle would have the option to access northbound Highway 217 from Dartmouth or Highway 99W.

e. Analysis indicates that there is a long term (20-30 years) need for Dartmouth Road to continue over Highway 217 and potentially south to Hall Boulevard as well as for extending the collector-distributor roads from the Highway 217/72nd Avenue interchange through the Highway 217/Highway 99W interchange. The Highway 217 corridor analysis to be performed by Metro and ODOT should consider the advantages and disadvantages of these improvements. The Dartmouth extension to Hall Boulevard should be constructed only if further system improvements to Hall Boulevard are made concurrently. If additional capacity is not added to Hall Boulevard south of where the Dartmouth extension would be connected, the effectiveness of this connection would be diminished. Alternatively, another roadway could be constructed that provides a connection from the Dartmouth extension to Hall Boulevard in the vicinity of McDonald Street.

f. Adopt the functional classification plan for streets internal to the Tigard Triangle as shown on Figure 1. The following policies apply to local streets within the Tigard Triangle:

1. Local street spacing shall be a maximum of 660 feet.
2. Access way spacing shall be a maximum of 330 feet.
3. Spacing of signalized intersections on Major Arterials shall be a minimum of 600 feet.

4. Existing rights of way will, to the greatest extent possible, be utilized for a local street system. Right of way vacations will be considered only when all other policies in this subsection are met.

g. The transportation projects described in this section should be added to the City of Tigard's Transportation System Plan. The City, ODOT and Metro should work to include these improvements in regional and state implementation programs.

(Rev. Ord. 91-13; Ord. 96-42)

IMPLEMENTATION STRATEGIES

1. The City shall develop, adopt and implement a master street plan that anticipates all needed trafficway improvements so as to plan for the necessary available resources to develop these streets when they are needed.

2. The City shall develop, maintain and implement a capital improvements program which:

   a. Is consistent with the land use policies of the Comprehensive Plan;

   b. Encourages a safe, convenient and economical transportation system;

   c. Furthers the policies and implementation strategies of the City's Comprehensive Plan;

   d. Considers a variety of transit modes within the rights-of-way;

   e. Meets local needs for improved transportation services;

   f. Pursues and establishes other funding sources from the federal, state, regional and/or local agencies; and

   g. Designates the timing of such projects to ensure their installation when those facilities are needed.

3. The City shall specify street design standards within the Tigard Community Development Code.

4. The City shall maintain the carrying capacity of arterials and collectors by reducing curb cuts and other means of direct access, and requiring adequate right-of-way and setback lines as part of the development process. The Community Development Code shall state the access requirements for each street classification.

5. The City's Tigard Community Development Code shall require developers of land to dedicate necessary rights-of-way[s] and install necessary street improvements to the City's standards when such improvements have not been done prior to the developer's proposals. These necessary dedications may be required upon approval of any development proposal.

6. The City shall control and limit the number of access points and will signalize trafficways in a manner that provides for a consistent flow of traffic and therefore minimizes or reduces vehicular emissions.

7. The City shall include provisions in the Tigard Community Development Code which addresses the aesthetic quality of the transportation system to ensure community livability and to minimize the effects on abutting properties. This can be accomplished through:

   a. Building setback requirements;

   b. Requirements for landscaping and screening and through other site design criteria for visual enhancement;

   c. Limiting residential land uses along major arterial trafficways; and

   d. Sign controls.

8. The City shall coordinate their planning efforts with adjacent cities and other agencies e.g., Beaverton, Portland and Tualatin, Washington County, ~~the Metropolitan Service District~~METRO, Tri-Met and ODOT.

9. The City shall work out reciprocal agreements with other agencies for exchanging information pertinent to local transportation planning.

8.~~2~~ 3 PUBLIC TRANSPORTATION

Findings

- Since the oil embargos of the 1970s, the cost of motor fuels has increased fourfold.

- The Tri-County Metropolitan Transportation District of Oregon (Tri-Met) is responsible for providing public transportation to the residents of Multnomah, Washington and Clackamas Counties.

- Presently, there are ~~four (4)~~Eleven (11) bus lines that service the Tigard area.

- Public transit offers the community an opportunity to reduce traffic and pollution as well as increase energy efficiency.

- Work trips and shopping trips are most conducive to mass transportation.

- The proposed downtown Tri-Met Tigard transfer center will increase service and lessen travel time for riders.

POLICIES

8.~~2~~3.1 THE CITY SHALL COORDINATE WITH TRI-MET TO PROVIDE FOR A PUBLIC TRANSIT SYSTEM WITHIN THE PLANNING AREA WHICH:

a. MEETS THE NEEDS OF BOTH THE CURRENT AND PROJECTED, FOR THE TIGARD COMMUNITY;

b. ADDRESSES THE SPECIAL NEEDS OF A TRANSIT DEPENDENT POPULATION;

c. REDUCES POLLUTION AND TRAFFIC; AND

d. REDUCES ENERGY CONSUMPTION.

8.~~2~~3.2 THE CITY SHALL ENCOURAGE THE EXPANSION AND USE OF PUBLIC TRANSIT BY:

a. LOCATING LAND INTENSIVE USES IN CLOSE PROXIMITY TO TRANSITWAYS;

b. INCORPORATING PROVISIONS INTO THE COMMUNITY DEVELOPMENT CODE WHICH REQUIRE DEVELOPMENT PROPOSALS TO PROVIDE TRANSIT FACILITIES; AND

c. SUPPORTING EFFORTS BY TRI-MET AND OTHER GROUPS TO PROVIDE FOR THE NEEDS OF THE TRANSPORTATION DISADVANTAGED.

IMPLEMENTATION STRATEGIES

1. The City shall request Tri-Met to extend service to areas within the City that do not currently have service.

2. In the City's Community Development Code, the City shall require large developments to provide transit facilities e.g., pull-offs and shelters, if such developments are located adjacent to transit routes.

~~3. The City shall coordinate with Tri-Met in the development of the proposed transfer center in downtown Tigard.~~

~~4~~3. The City shall propose land use densities, within the Comprehensive Plan, along transit oriented corridors that support public transportation service.

~~5~~4. The City shall work with Tri-Met and other transit providers to encourage transit service for the transit dependent population e.g., the poor and handicapped.

~~6~~5. The City shall encourage its citizens to use mass transit systems, where possible, to make greater effectiveness of the transit system while reducing automobile usage.

~~7~~6. The City shall coordinate with the transit providers to encourage carpooling and investigate if there is a local need for carpooling in the Tigard area.

8.~~3~~ 4 TRANSPORTATION FOR THE DISADVANTAGED

Findings

- Tri-Met is responsible for providing handicapped transit accessibility including coordination of special transit services by social service agencies.

- Tri-Met conducts the detailed special handicapped transit planning necessary to identify required service improvements and adopt a plan for meeting federal requirements for handicapped accessibility.

POLICY

8.~~3~~4.1 THE CITY SHALL COORDINATE WITH WASHINGTON COUNTY, TRI-MET AND OTHER REGIONAL AND STATE AGENCIES IN THE IDENTIFICATION AND ACCOMMODATION OF INDIVIDUALS WITH SPECIAL TRANSPORTATION NEEDS.

IMPLEMENTATION STRATEGIES

1. The City shall require, through the implementation process, that parking spaces be set aside and marked for disabled persons [parking] and that such spaces be located in convenient locations.

2. The City shall continue to coordinate with [the] appropriate agencies in the identification and accommodation of those individuals with special transportation needs.

8.~~4~~ 5 PEDESTRIAN AND BICYCLE PATHWAYS

Findings

- As the City of Tigard continues to grow, more people may rely on the bicycle and pedestrian pathways for utilitarian as well as for recreational purposes.

- In 1974, the City Council adopted a Comprehensive Pedestrian/Bicycle Pathway Plan.

- The City has required adjacent development to install that portion of the bicycle/pedestrian pathways shown on the adopted plan which abuts the development.

- The City has implemented portions of the adopted plan through the City's overlay program.

- The adopted Bicycle/Pedestrian Plan provides for a dual function pathway system; bicycles and pedestrians use the same system.

POLICY

8.45.1 THE CITY SHALL LOCATE BICYCLE/PEDESTRIAN CORRIDORS IN A MANNER WHICH PROVIDES FOR PEDESTRIAN AND BICYCLE USERS, SAFE AND CONVENIENT MOVEMENT IN ALL PARTS OF THE CITY, BY DEVELOPING THE PATHWAY SYSTEM SHOWN ON THE ADOPTED PEDESTRIAN/BIKEWAY PLAN.

IMPLEMENTATION STRATEGIES

1. The City shall review each development request adjacent to areas proposed for pedestrian/bike pathways to ensure that the adopted plan is properly implemented, and require the necessary easement or dedications for the pedestrian/bicycle pathways.

2. The City shall review and update the adopted Pedestrian/Bikeway Plan on a regular basis to ensure all developing areas have accessibility to the Pedestrian/Bikeway system.

3. The City shall coordinate with Washington County to connect the City's Pedestrian/Bike Pathway system to the County's system.

4. City codes shall include provisions which prohibit motor driven vehicles on designated and maintained pedestrian/bicycle pathways.

8.5 6 RAILROADS

Findings

- Tigard is serviced by Southern Pacific and Burlington Northern railroad lines which carry strictly freight through the City Limits.

- Within the downtown area each railroad company has its own trackage and the usage of those lines is based on the railroads' needs.

- There should only be one set of railroad tracks traversing the downtown area. The City is in the process of discussing this issue with both railroads.

- Many of the commercial and industrial businesses within Tigard rely on the railroads for the shipping and receiving of goods.

- The City is currently coordinating the upgrading of all the railroad crossings within Tigard with the railroads.

POLICY

8.~~5~~6.1 THE CITY SHALL COOPERATE WITH THE RAILROADS IN FACILITATING RAIL FREIGHT SERVICE TO THOSE COMMERCIAL AND INDUSTRIAL BUSINESSES WITHIN THE CITY THAT DEPEND ON RAILROAD SERVICE.

IMPLEMENTATING STRATEGIES

1. The City shall continue to coordinate with the Southern Pacific and Burlington Northern railroads to provide adequate railroad service.

2. The City shall designate adequate commercial and industrial land within close proximity to existing railroad service lines to ease railroad accessibility to those businesses that rely on the service.

3. The City shall coordinate with the railroads to combine the trackage within the downtown area.

Tigard Draft TSP Comment Log

Summary of Public & Agency Comments and Responses on Draft TSP
01/02/02

Section I

This section of the comment log represents comments received before the November 20, 2001 City Council worksession meeting, including comments received during the Planning Commission public hearing on February 5, 2001 and at the City Council worksession on March 20, 2001. Changes have been made to the Draft TSP in response to the comments in this section.

No.	Where/Who	Date	Comment	Response
1	CIT	11/3/00	ORE 99W seems doomed – what are the options to improving?	The TSP outlines several alternatives for improving traffic operation on ORE 99W. Pages 8-30 through 8-51 of the draft TSP describe the issues, alternatives and recommendations for ORE 99W. Seven recommendations are listed on Page 8-35.
2	CIT	11/3/00	How will the plan funding work – will it be incremental?	Transportation funding is a complex subject involving federal sources, regional allocations, state funds, countywide levies/TIF and local sources. The draft TSP clearly points out the deficiency of the current funding sources to sustain future demand. Steps will have to be taken incrementally to fund the highest priorities first (as outlined in Chapter 11 of the draft TSP) and work cooperatively with state, regional and local sources of funds. Increased funding at all levels will be necessary to meet the forecast needs at service levels defined in the draft TSP.
3	CIT	11/3/00	How many trucks are on Durham Road? Are they allowed?	Trucks are allowed on Durham Road. As part of the draft TSP a through truck map has been developed. Durham Road would allow trucks making deliveries but not through truck movement. Counts in 1994 and 1997 consistently showed about 1-2 percent trucks in the PM peak period and about 5 percent in the AM peak period.
4	CIT	11/3/00	Is there a project to correct the sharp curves on Bull Mountain Road?	This is not included in the TSP and there are no City plans to complete this project. Citizens may, however, bring this issue up when the City asks for CIP funding project suggestions.

5	CIT	11/3/00	What types of intersection improvements are being done and when?	Table 8-8 and Figure 8-20 shows the location of intersection improvements. This will be the starting list that will be prioritized as funding sources are developed. Most of these projects will be funded through regional, county and local funding sources over the next 20 years.
6	CIT	11/3/00	Are local streets planned west of 150th, south of Bull Mountain Road?	Yes, however, because most of this area remains undeveloped, specific street locations were not identified on the plan. The key strategy in this area identified in the draft TSP is for access management to preserve the operational integrity of key arterial (Beef Bend) and collectors (150th) in the area. Any new development in this area will be required to provide streets with connectivity that meets the standards of the Tigard Development Code and addresses the policies of the Comprehensive Plan.
7	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Three Planned CIP projects (page 8-42) widen the roads to 5 lanes with the exception of the Durham Road section between UBFR and 72nd. If people traveling east on Durham Rd. wanted to go south to I-5 or the potential new development on the quarry site, I would think extending the 5 lanes on Durham would be beneficial. Also, having this section designated as a Collector (Figure 8-3) does not follow the definition listed in page 8-2; feels it goes beyond a citywide circulation function and is a Minor Arterial.	The future travel forecasts show the demand and need for five lanes between Durham Road and the I-5 Carman Drive interchange (which is why a major realignment is proposed to service demand in that area). There are three routes for traffic to spread out on going south from Durham – Durham itself, 72nd and Upper Boones Ferry Road. The arterial route is to the regional freeway interchange (as determined in the capacity analysis and travel forecasts). Other arterials (72nd and Upper Boones Ferry Road) service the interchange to the south. Durham east of Upper Boones Ferry Road only serves to collect traffic in the adjacent business park, which is why it is designated a collector.
8	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Area from Carmen Drive to Bridgeport needs to be viewed as a special area since development of the quarry site is anticipated. Widening 72nd to 5 lanes would provide some mitigation of this existing bottleneck.	The draft TSP outlines the need improvements in the next twenty years for this area in Tigard.
9	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	TSP is not consistent in how it shows 72nd. Figure 8-11 has it listed for 2/3 lands between Bonita and Bridgeport. Figure 8-19 shows roadway widening to 5 lanes for most of 72nd but stops just south of the Carmen Intersection.	Figure 8-11 will be edited to make it consistent with Figure 8-19 and Tables 8-7 and 8-8 (five lanes).
10	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Questions assumptions that 72nd would be serving "mostly local traffic".	72nd serves a wide range of traffic ranging from fronting industrial land access to district circulation to key citywide/subarea north-south capacity. In the future, 72nd serves all three of these functions.

11	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	There are 2 conflicting options for the Durham Road/UBFR intersection. Can not comment without more detail.	See no. 9 above.
12	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Quarry site should be factored into the 72nd, UBFR and Durham Road option analysis	The regional travel forecasts include housing and employment for the future (2020). The regional land use data does not specifically identify site developments, but incorporates increases in households and employment. The future forecast has several hundred employees and households in that area, increasing from the base existing conditions.
13	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Signage at the 72nd/UBFR intersection to indicate 72nd would be the most direct route to the I-5/Bridgeport interchange may help the performance of the 72nd/Durham Road intersection	The realignment of Durham Road in the draft TSP will address the route to I-5 issue. In the short term, coordination with Tigard and ODOT staff to modify signing in this area is possible through maintenance activities.
14	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	While option to realign the UBFR/Durham intersection so that Durham would be a continuous route to Carmen (figure 8-46) is interesting, it seems more feasible to proceed with the 5 lane improvements that are also listed as an option.	The impact to the business park in the area east of Upper Boones Ferry Road would be significant and with little capacity benefits. That is why the Durham/Carman realignment is recommended in this location.
15	Roel Lundquist, City Administrator City of Durham Via letter	11/7/00	Would like more information on the extension of Hall to Tualatin. If feasible, it would provide another north/south route that would alleviate some of the traffic pressures on UBFR.	The 2020 projections for this crossing are between 15,000 and 20,000 vehicles per day. It does provide significant circulation and capacity enhancement between Tigard and Tualatin, reducing the need to wide Upper Boones Ferry Road.
16	Alexander Craghead via letter	11/27/00	TSP seems to focus too much on widening roads to solve the capacity issue. Feels that Improvements to the freeway system would go a long way to solving Tigard's traffic problems	Freeway system improvements are a key element of the overall strategy to balance the future needs, capacity and service standards for Tigard. Pages 8-33 through 8-35 of the draft TSP specifically mention the need for the freeway improvements. However, freeway improvements by themselves will not alleviate the need for other motor vehicle improvements in Tigard. The draft TSP outlines the balance between all the modes of transportation improvements that would be necessary to meet Tigard's future needs.
17	Alexander Craghead via letter	11/27/00	Heavy emphasis on capacity erodes effectiveness in safety and flow improvements. Questions the safety of the Hall/Commercial and O'Mara/Hall intersections due to heavy foot traffic and the fact that darkness factor	Improvements to Hall Boulevard at these locations are part of the improvements identified in the draft TSP. The reason capacity improvements outweigh the other modes is the cost to implement these improvements. This is balanced by the motor vehicle system's function that services over 90 percent of the trip making

			during evening rush hour. TSP does not address this. Concern that capacity improvements far outweigh connectivity and transit improvements in the TSP	in Tigard. Improvements to **each mode** of transportation are outlined and summarized in Chapters 1 and 11 of the draft TSP.
18	Alexander Craghead via letter	11/27/00	Wider roads lead to greater community divisiveness between the citizens of the City.	Congestion and travel delay also result in lower quality of life. The draft TSP balances the future needs and improvements by setting a service standard that minimally meets the needs for mobility at peak times with the desire to minimize improvement costs and impacts.
19	Alexander Craghead via letter	11/27/00	Concern that the projects listed are very costly and the alternative of list reduction seems to have been rejected as "not in the public interest" Does not like the additional "schemes" outlined to aid in funding the projects. Does not feel that these are in the best interest of the City.	Funding will be addressed through initiatives and actions following adoption of the TSP. The alternatives presented in the TSP outline the extent and nature of potential efforts to meet future needs.
20	Alexander Craghead via letter	11/27/00	Proposal: • Reduce most five land widening projects to three lanes, with bike paths and sidewalks. Exceptions would be made in the case of the 72nd Avenue related widenings and the Dartmouth Avenue widening, making 72nd the primary surface through route from Portland to Tualatin. • Reduce most 3 lane projects to 2 lanes, plus bike paths and sidewalks on at least one side • Eliminate the 7 lane widening projects for 99W and Scholl's Ferry • Keep planned improvements to I-5 and to 217 • Fund phases II and III of the I-5/217 interchange project • Utilize freed up funding for a greater scope of intersection realignments, redesigns, and signalizations to improve timing, safety and flow • Prioritize connectivity projects over	Comment noted. However, all the motor vehicle capacity and circulation needs of the future cannot be met by simply widening the freeway system. The improvements noted in the draft TSP will be implemented incrementally, resulting in improvements being made at intersection first (due to costs) with more complex projects being undertaken later. Numerous intersection improvements are outlined in the draft TSP (Table 8-8). All the improvements collectively act to address future needs in Tigard. Removing elements of this improvement strategy will result in impact to other streets (congestion) and other improvements being necessary that may not be as operationally or cost effective.

			capacity projects. • Eliminate controversial projects and projects that will be difficult to implement, such as the Walnut extension to Ash and the Wall Street extension to Hall • Higher prioritization of Commuter Rail • More serious consideration to a full scale intra-city transit system to better serve internal transportation needs.	
21	Public meeting	12/4/00	If you make a street easier to get to and drive on, won't more people want to drive on it?	The objectives outlined in the goals and policies of the TSP develop a balanced approach to modes, connectivity and capacity. Addressing these together as a system results in greater use of all mode and more options. In many cases the additional connectivity outlined in the draft TSP is aimed at the opposite result – balancing demand on several routes to reduce the impact to any one street.
22	Public meeting	12/4/00	Did the City work with Beaverton regarding extending Murray Blvd?	This improvement is in both City's TSPs. There are many environmental issues to work out and it may take several years to address the specific environmental and funding details.
23	Public meeting	12/4/00	Are you certain Western By-pass won't work? We thought that about 217 and look at it now.	It would allow more direct traffic but would not eliminate local traffic issues in Tigard. The approach being taken is more toward management of existing system instead of building more freeways given the existing understanding of growth in the next 20 years. Significant changes to the urban growth boundary could change this understanding, but it is speculative at this time to guess where those changes may occur in the next 20 to 50 years.
24	Tom Coffee, Assistant City Manager City of Lake Oswego Via letter	12/4/00	Given the general level of congestion, function and types of land uses between Hall Blvd and Bangy Road, both Tigard and Lake Oswego may want to consider future designation of this corridor as a Minor Arterial.	Bonita Road is the key linkage in this area. It serves as a collector route between Tigard and Lake Oswego. This designation is consistent with the Metro RTP. Because Bonita does not serve a regional function in terms of what is connects, it does not meet the criteria of an arterial designation.
25	Tom Coffee, Assistant City Manager City of Lake Oswego Via letter	12/4/00	Carmen drive has a different classification in Lake Oswego (Major Collector) than in Tigard (Arterial Truck Route)	The difference stems from the uses, function and connectivity of Carman and Durham in Tigard. The connectivity to the regional highway system and 72nd Avenue defines the function of Carmen to Durham in Tigard. This designation is consistent with Metro RTP designations.
26	Tom Coffee, Assistant City Manager	12/4/00	Concern that the proposed intersection improvements at Carmen and I-5 will impact	Roosevelt is in the City of Lake Oswego and does not meet the ODOT prescribed access spacing standard in an interchange area

	City of Lake Oswego Via letter		the intersection of Roosevelt and Carmen Drive due to ODOT's new ORS for access spacing.	(1,320 feet). In Tigard, Sequoia Parkway would fall into this same condition. As pre-existing access points, these intersections will remain. Over time, should major redevelopment occur, ODOT may desire to coordinate with the cities to improve the access spacing in this area should condition provide the opportunity.
27	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 8-3: revise the configuration of 132nd at Walnut. This should not be a neighborhood route. SW 132nd was realigned and renamed to be a part of SW Greenfield drive, and now intersects with SW Gaarde. SW Greenfield should be the neighborhood route.	The new street configuration has been reflected in the updated mapping of Figure 8-3 for this street. The amended figure 8-3 is attached
28	Brian Rager, City of Tigard Development Review Engineer	11/29/00	The proposed connection between SW Gaarde and the southerly portion of SW Greenfield looks unrealistic due to the large drainage ravine.	Existing stub streets and right-of-way exist for this connection. It is not likely that this connection will be given priority over several other significant improvements needed in Tigard. This condition will be presented specifically to the Planning Commission for their recommendation.
29	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Given the topography, SW 133rd , north of Beef Bend is really not realistic. This should be looked at again	Existing right-of-way exists for this roadway. Depending upon site development of adjacent lands, a roadway could be built in this locations (as part of development access needs) but it is likely to be built with road standards sensitive to its hillside setting.
30	Brian Rager, City of Tigard Development Review Engineer	11/29/00	The Woodhue, 141st avenue and the Peachtree avenue connections are now finished	Figure 8-3 has been revised to reflect the finished street locations. The amended figure 8-3 is attached
31	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Why are they not showing the SW Atlanta connection over to Dartmouth? If this is going away, the Tigard Triangle Plan will need to be revised as well.	The Tigard Triangle plan is not being amended. All TSP maps will be amended to reflect Atlanta as shown on the Triangle Plan. This connection was shown in the TSP local connector maps, but will in be included in the functional classification maps (consistent with the Triangle study).
32	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Royalty Parkway, east of 99W should be part of a neighborhood route.	The amended Figure 8-3 (attached) reflects the finished street locations, with Royalty Parkway as a neighborhood route.
33	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Page 8-13, Table 8-2: Turn lanes should be a minimum of 12 feet wide on collectors and arterials.	The table will be changed to show that the minimum turn lane width is 12 feet with a foot note that will state: "In constrained conditions on collectors, neighborhood and local routes, a minimum width of 10 feet may be considered (except on bus routes)"
34	Brian Rager, City of Tigard Development	11/29/00	I think 6 feet is too narrow for parking lanes. The City has been going with 8 feet for some	Parking lanes should be planned for 8 feet. The 6 foot designation was listed only for the 32 foot street where the removal of two 8

	Review Engineer		time now.	foot parking lane areas leaves less than 20 feet for traveled way. Current City standards call for 32 feet of right of way with 8 foot travel lanes, therefore staff agrees that it would be misleading to state the parking lane width is 6 feet when in all reality, 8 feet would still be required. A footnote is suggested under Table 8-2 on page 8-13 which states "For 32 foot wide streets, the City recognizes that in some instances, there will not be 20 feet of unobstructed pavement".
35	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Medians should be defined in the table. Are they simply left turn lanes? Figure 8-5 and others seem to imply this.	The intent is for medians and/or center turn lanes. This will be clarified in the final TSP document by changing "Medians" to "Medians or center turn lane"
36	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 8-8: The diagrams should be changed to show the TYPICAL section to have a curb-tight sidewalk, with trees planted behind the sidewalk. The reason for this is because the overwhelming majority of Tigard local streets are already built to this configuration. I think we are too late to begin shifting to a planter strip configuration. Also, the "trees behind" configuration allow us to be more flexible on the ROW width. For instance, we have allowed the street trees to be placed within a "landscape easement" outside of the ROW. So you could have a 32' wide street, with sidewalks on both sides and only have a 42' wide ROW (perhaps)	The TSP task force committee specifically wanted to have setback sidewalks, therefore this is a decision that must be made by the Planning Commission and City Council. The direction of the Task Force was to include a landscape strip, except in cases where physical, environmental or topographic feature required a design deviation to curb tight conditions. This issue was discussed in more detail at the 2-5-01 Planning Commission meeting. The Planning Commission who were part of the task force indicated that the concern was for aesthetics and they were concerned that if they did not require setback sidewalks, they would not get them. After discussing this in more detail, the Planning Commission indicated that they were in support of changing the requirement to curb tight with people having the option to go with setback sidewalks. This will be changed in the final TSP document. The amended figure 8-8 is attached.
37	Brian Rager, City of Tigard Development Review Engineer	11/29/00	The 1-foot wide gap between the sidewalk and the ROW line is outside of what we do now and would throw in another confusing element. Besides, if we do away with the planter strip scenario, this becomes moot. But even if the City decides to go with a planter strip, there is no need for the 1-foot gap.	The intent of the 1 foot gap was to have a construction/utility easement in the event road work needed to be done and to provide flexibility for utilities. Based on conversations with engineering staff, a 1 foot wide easement would not provide enough space in the even that construction was needed and would add an additional level of confusion. With this in mind, the 1 foot wide gap will be removed from the cross section schemes.
38	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Even if the City decided that they want to shift to a planter strip scenario, a 3 ½ to 4' wide planter strip is adequate as confirmed by the City's Urban Forester. We should try to avoid taking any larger than a 50 foot ROW	A 50 foot right-of-way for a 32 foot curb to curb street could include a five foot sidewalk and 4 foot landscape strips. The additional four feet shown in the draft TSP was for an additional one foot utility/construction easement area and a one foot larger landscape strip (the 4 foot strip would leave only 3.5 feet subtracting out the 6 inch curb).

39	Brian Rager, City of Tigard Development Review Engineer	11/29/00	The "criteria" table says that landscape strips are required. This seems to conflict with table 8-2, where we are saying they are not required for neighborhood streets. Therefore, why would we want them on locals, but not on neighborhood streets? My vote is to stay away from them on both locals and neighborhood streets.	Table 8-2 will be edited to indicate that landscape strips are required for neighborhood streets as noted in Figure 8-9.
40	Brian Rager, City of Tigard Development Review Engineer	11/29/00	People complain about planter strips in a neighborhood because they step out of their car and sink up to their ankles in soggy grass. The strip makes more sense on higher order streets, like collectors and arterials, where the speeds are higher and pedestrian traffic is higher.	See response to comment #36 above.
41	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Under the criteria table, the On-street parking should be set at a constant value. Avoid ranges at all costs! It only adds to Staff's grief when we have to "haggle" with developers. 6 feet is too narrow. Not many people hug the curb with their cars when they park, and a driver passing by a parked car is not going to hug close to the parked car.	See response to comment # 34 above. The criteria table of Figure 8-8 will be amended to state that the on-street parking dimension is 8 feet. The amended figure 8-8 is attached.
42	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Regarding the notes: What does Note #1 mean? We do NOT allow mountable curbs and do not wish to go there. If there is talking about a center median, a.) we don't have them on locals, except for very rare circumstances and b.) even if we did, 19 feet is excessive. 15 feet has been acceptable to TVFR. We need some clarity here.	Staff will contact TVF&R to determine if 15 feet between the median and the curb is in fact acceptable. Assuming they still are asking for mountable curb, the Planning Commission and City Council must make the decision (like the parking lane issue in comment #34) of whether to be consistent with current City policy and not require mountable curbs or to follow TVF&R recommendations and require them. Staff had not been able to contact TVF&R at the time the staff report and attachments were due, however, we will provide information at the public hearing on this matter. If TVFR is agreeable, the mountable curb note will be removed.
43	Brian Rager, City of Tigard Development Review Engineer	11/29/00	The last sentence in Note #2 is wrong because the drawings show only one option for the sidewalk and planter strip. This note should be altered accordingly.	The last sentence of note #2 will be deleted since there are not 2 options given for sidewalks in the cross sections provided.
44	Brian Rager, City of	11/29/00	Note #3 is wrong (or at least inconsistent with	This note will be modified to reflect the curb width is additional.

	Tigard Development Review Engineer		what we do) because when we have a curb tight sidewalk, we require 5 full feet for the sidewalk IN ADDITION to the curb. Therefore, you actually have 5.5 feet of "concrete", including the curb.	
45	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 8-9: Note #6 is not accurate because we do NOT typically have a 1' gap, even if we have a sidewalk separated from the curb. This is not needed.	Based on the discussion in comment #37, this note will be deleted.
46	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 8-10: Arterial Collector I suggest the title be changed to say "Collector and Arterial Sample Street…….", for clarity. Someone may ask what an "arterial collector" is.	This will be changed in the final TSP document.
47	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Page 8-20: In second paragraph the reference should be City of Tigard "Public Improvement Design Standards".	The final TSP will refer to the City of Tigard "Public Improvement Design Standards" instead of the "Standard Specifications for Public Works construction" that is referred to in the draft.
48	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 8-16: Add connection for Walnut Lane (north of Fern)	The map will be revised to reflect existing streets constructed and to show a connection in the area of Walnut Lane, north of Fern.
49	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Revise map to reflect what is now built in Quail Hollow East and West. The Peachtree connection down at Beef Bend Road is now completed.	The map will be revised to reflect existing streets that have been constructed.
50	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Page 8-55, 56: Access Management I am glad to see this section in here. I support the City adopting access management standards. What we have now is very weak. However, we may want to look at the County and ODOT standards to make sure we are not setting our Staff up for multiple variance requests. I say this because I OFTEN see projects not meeting WACO or ODOT spacing standards, only to see the applicants drag through a variance process. Often the developers are eventually granted the access,	Staff will have to come back at a later to date to propose revisions to the development code to reflect the standards being developed in the TSP and Comprehensive Plan. At that time, additional attention can be given to the specific standards and whether exceptions are appropriate to be written into the code or if variances are the action needed. The ODOT Highway Plan spacing standards will apply to ORE 99W (530 - 740 feet), Hall Boulevard (400 - 475 feet) and streets/driveways within 1,320 feet of ORE 217 or I-5 interchanges. For Washington County roads access spacing standards would be 1,000 feet for major arterials, 600 feet for minor arterials and 150 feet for major collectors. The spacing standards outlined in the TSP would apply for City streets 1,000

			but it takes a lot of time. There should be very clear criteria for being granted a variance to the spacing standard, to assist Staff in reviewing the requests.	feet maximum/600 feet minimum for arterials and 400 feet maximum/200 feet minimum for collectors. The maximum and minimum standards balance safety needs and connectivity needs. Additionally, two other standards are recommended. First, a restriction of direct access of new single family units on arterials and collectors (this would include an exception process that addresses safety and neighborhood traffic management needs). Second, an access report with new land development that requires applicants to verify design of their driveways and streets are safe meeting adequate stacking needs, sight distance and deceleration standards as set by ODOT, Washington County, the City and AASHTO (utilizing future traffic volumes from this TSP as a future base for evaluation).
51	Brian Rager, City of Tigard Development Review Engineer	11/29/00	We should also add a criteria for spacing of a driveway from the intersection of collectors or arterials. Right now, TMC 15.04.080.c allows a driveway to be as close as 30 feet from intersecting ROW lines of any street. I have had heartburn about this one for a while, and now may be an opportunity to correct this. I know in Tualatin, they have a standard that says a driveway shall be at least 150 feet back from the intersection of collectors or arterials. In a case where a project has less than 150 feet of frontage, they would look at potential shared access, or if that were not practical, make the developer put his driveway as far from the intersection as the frontage would allow (5 feet from the property line).	See response to comment #50. Sites with limited frontage may be required to share access or place access on lower level (local) streets to reduce impacts to public safety. This issue should be incorporated in the Public Improvement Design Standards with the revisions recommended by this TSP for access management as well as the Development Code.
52	Brian Rager, City of Tigard Development Review Engineer	11/29/00	Figure 9-1 (also Figure 3-18): Major Pipeline Routes • They need to add the line that runs north/south along the BPA ROW just east of SW 150th Avenue (see markup of figure).	The figures that refer to existing pipeline locations will be revised to reflect this pipeline in the final TSP document. The ammended figure 3-18 showing this pipeline is attached.
53	Dick Bewersdorff, City of Tigard Current		What would be the impact of going to Level E in service and cost?	At several locations this has been done already with this TSP. It reflects congestion similar to ORE 99W near Greenburg and Hall.

	Planning Manager			Allowing greater congestion would add to delays and reduced travel times (5 to 10 minutes in Tigard). Allowing less congestion will impose substantial impacts (cost, property, environmental) that could multiply the costs in the draft TSP by double or triple. The proposed TSP seeks a balance between the benefits of the level of transportation service with costs and impacts.
54	Dick Bewersdorff, City of Tigard Current Planning Manager		Existing conditions map says rainy day simulation (misprint?)	This is a typo and will be edited with the final TSP.
55	Dick Bewersdorff, City of Tigard Current Planning Manager		Assume maps with legends like where does traffic on Oregon 99W go will be colored otherwise they are useless.	A differential pattern will be utilized in the revision of the draft TSP to final.
56	Dick Bewersdorff, City of Tigard Current Planning Manager		Tigard Transportation System Plan shows an off street path from Nimbus to Oak to Hall. Is this in Washington Square Plan? And is it on the improvement list? Also shown on Figure 5-1.	This linkage was shown on draft trail maps in the area. Tualatin Hills Parks and Recreation District (THPRD) has updated their trail map and those off-street routes will be reflected in the final edits to Figure 5-1. The specific off-street trail referenced is not in the current THPRD master plan.
57	Dick Bewersdorff, City of Tigard Current Planning Manager		Proposed functional classification system has local streets on it inconsistently. Where is Atlanta Street connection and the O'Mara-Hunziker connection?	The summary map in Chapter 1 of the draft TSP will be edited to be consistent with the updated Figure 8-3 in Chapter 8 of the TSP.
58	Dick Bewersdorff, City of Tigard Current Planning Manager		It would be extremely helpful to label and identify types of streets on the arterial/collector cross section.	Figure 8-10 will be amended to indicate 2 lane, 3 lane, 5 lane and 7 lane street cross sections. The lane width for specific collectors and arterials is determined by Figure 8-11 of the TSP.
59	Dick Bewersdorff, City of Tigard Current Planning Manager		Figure 8-11 adds cross over at Hunziker to Hampton and Walnut connection to Hunziker?	All maps will show these connections (Chapter 1 graphics, Figure 8-3 and Figure 8-11).
60	Dick Bewersdorff, City of Tigard Current Planning Manager		On 8-19 in front, the location of the O'Mara-Hunziker is different from that in 8-19 in back.	This is correct. The Chapter 1 summary portion will be amended to be consistent with the Chapter 8 text portion.
61	Dick Bewersdorff, City of Tigard Current Planning Manager		8-19 does not show Nimbus connection to Greenburg. It is on 8-3. This brings up the question, which map do planners use to determine where to build new streets?	Figure 8-19 lists improvements anticipated to be completed within 20 years. This figure should be amended to show the Nimbus/Greenburg connections because it is anticipated within the 20 year timeframe as part of the Washington Square Plan. In addition, the Figure title will be amended to read "20 year street improvement plan"
62	Dick Bewersdorff,		Comments heard. Write a letter to Laurie	This section is a summary of the plan and process. The final TSP

	City of Tigard Current Planning Manager		Nicholson – should be changed.	document will be revised to delete the last 2 pages of Chapter 1.
63	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 2, Goal 1: Says will develop sidewalk standards to define various widths. Development Code or Engineering Standards?	The sidewalk standards will have to be developed and incorporated into both the Engineering standards and the Development Code. This will be completed in the future.
64	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 2, Goal 2: Says fixed route transit will use arterial and collectors, will we have to ticket buses if they travel on a local street?	No. This policy establishes a frame for planning transit cooperatively between the City and Tri-met. The objective is for transit services to utilize arterials and collectors whenever possible. To clarify this further, the second line of Goal 2, policy shall be amended to read "Fixed route transit will primarily use arterial and collector streets in Tigard."
65	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 3: Bicycle lanes must be constructed on all arterials and collectors. Who pays – rough proportionality? Isn't this an issue of over-sizing for community use?	This is the same as any other requirement on arterials and collectors. It is a City requirement, we require what we can justify and the City will have to look at making up differences if there is one. It is important to note that facilities are not oversized, they are sized appropriately to address the future modal needs. Chapter 11 discusses funding options.
66	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 4: Says sidewalks shall be constructed on all streets with construction or re-construction projects. Will we be in violation of plan for single-family's built by partition?	The Development Code already requires sidewalks to be constructed adjacent to development. In instances where street or sidewalk improvements can not be justified, the improvements would not be required. In addition, the Development Code will have to be amended to fully implement the Comprehensive Plan changes and TSP. At that time, exceptions for flexibility may be added to unique circumstances such as partitions.
67	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 5, Goal 2: Guidelines for access control. What are they and who will do?	These will have to be developed by Engineering and incorporated into the Engineering standards and specifications and the Development Code. Access management limits the number of access points (driveways) to preserve the functional integrity and safety of a roadway. Allowing frequent access points can impact the capacity, safety and function of a roadway (eg. ORE 99W).
68	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 6: Required to identify and mitigate high collision location if generate 10% increase in traffic. Put in code, but what about rough proportionality and then is it denial if not roughly proportional?	Development applications are required to do traffic studies and mitigate their impact. In this case, improvements would be proportional because the development would be creating a 10% or more increase to traffic safety problems.
69	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 8: Reword.	

70	Dick Bewersdorff, City of Tigard Current Planning Manager		Policy 1, Goal 4: What is meant by "special districts" and how would they work?	Special Transportation Areas (STA) are allowed by ODOT in the Highway Plan to apply unique service standards to downtown/district areas. While the TSP does not define any STA's in Tigard, these areas could be developed in the future should it be deemed in the interest of the City.
71	Dick Bewersdorff, City of Tigard Current Planning Manager		Page 3-14, Table is not labeled.	This is a continuation of table 3-1 from the previous page.
72	Dick Bewersdorff, City of Tigard Current Planning Manager		Existing land use map is poor.	An updated map will be included in the final TSP.
73	Dick Bewersdorff, City of Tigard Current Planning Manager		Major pipeline map does not include petroleum line.	This map has been amended to show the Kinder Morgan petroleum pipeline from Scholls Ferry Road south near 135th south through Tigard generally along the BPA easement line. The ammended figure 3-18 is attached.
74	Dick Bewersdorff, City of Tigard Current Planning Manager		Strategy 3: If there are existing sidewalks in close proximity, either developer or City will be required to extend to meet. Funding – Distance Standard – 300 feet?	This strategy (on page 5-4) shall be amended by adding the following language: To effectively implement this strategy, close proximity shall be determined to be within 300 feet of the proposed development. In addition, if extension is not found to be roughly proportional to the development, the City shall add this to future years CIP consideration list.
75	Dick Bewersdorff, City of Tigard Current Planning Manager		Strategy 8: Code enforcement – sidewalk maintenance.	Sidewalk maintenance is an existing requirement in the Municipal Code, therefore, this does not result in any increase requirements of standards. Code Enforcement would be the appropriate contact in the event of sidewalk dis-repair.
76	Dick Bewersdorff, City of Tigard Current Planning Manager		Complimenting land development actions (page 5-12). Therefore, fronting improvements involving sidewalks are required on every change of land use or roadway project. Do we want that in Code or in relationship to construction? Funding.	The intent of this strategy is to require improvements when the change increases demand on the facility. In cases where the demand is the same or decreased, no improvements can be justified. This will be addressed with the Development Code changes to implement the TSP and Comprehensive Plan changes in the future.
77	Dick Bewersdorff, City of Tigard Current Planning Manager		All commercial projects generating over 1,000 trip ends should provide a pedestrian connection plan. Will be new code requirement.	It is anticipated that at some point in the future, the Development Code will be amended to reflect the changes required by the TSP.
78	Dick Bewersdorff, City of Tigard Current		Figure 6-2: Bicycle Master Plan, 74th trail – which side of creek?	This will be determined at the time of project development. Several factors will need to be considered including environmental

	Planning Manager			impacts, wetland areas and access to adjacent lands.
79	Dick Bewersdorff, City of Tigard Current Planning Manager		Page 7-4: (Strategy 2) Need for bus shelter. Code requirement or use existing?	There is already language in the Development Code for Tri-met facility upgrades to be considered when a new project abuts a transit facility, therefore, no additional Development Code changes will be necessary.
80	Dick Bewersdorff, City of Tigard Current Planning Manager		Page 8-1: Type spacing.	This is a formatting issue which will be corrected with the final TSP document.
81	Dick Bewersdorff, City of Tigard Current Planning Manager		Page 8-3: Maximum intersection level of service standard. What, who and where should it be placed? Code or Engineering spec book?	Goal 4, policy 1 on page 8-3 addresses minimum (not maximum) intersection LOS. Engineering will have to establish the criteria. When traffic studies are required, they will evaluate the LOS at key intersections and provide recommendations to meet LOS criteria, if necessary.
82	Dick Bewersdorff, City of Tigard Current Planning Manager		Figure 8-3: Shows a connection of 68th? Connection at Bull Mountain to Gaarde? Explain? Why not Ames Orchard? One Peachtree to Beef Bend - done. Erickson Heights – connection done.	Figure 8-3 has been updated to reflect these streets that have been finished since the draft TSP was published. The amended figure 8-3 is attached.
83	Dick Bewersdorff, City of Tigard Current Planning Manager		Page 8-10: Says County is in process of reviewing. What did they say?	Washington County's TSP is in the process of being updated. These changes have been take into consideration in their TSP process.
84	Dick Bewersdorff, City of Tigard Current Planning Manager		Table 8-1: Not classified. Local?	These streets were not classified in the prior plans because they were not constructed yet.
85	Dick Bewersdorff, City of Tigard Current Planning Manager		Figure 8-8 (1): Space between curb and median 19 feet? (2): Actual width can be modified. What guideline?	This space is to meet Tualatin Valley Fire District (TVFD) needs. The engineering standards developed following the TSP will need to address any guidelines.
86	Dick Bewersdorff, City of Tigard Current Planning Manager		Figure 8-10: Where appropriate, median lane may not be provided – what will guide?. Engineering standards – label collectors and arterials.	The Development Code language will be developed which addresses medians and situations where flexibility will be provided.
87	Dick Bewersdorff, City of Tigard Current Planning Manager		Cross section: To be in Public Works specs.?	Yes.
88	Dick Bewersdorff, City of Tigard Current		Figure 8-11: Do we now require dedication for 7 lanes on Pacific Hwy and for turn lanes	For projects in these areas, right-of-way dedications/setbacks will be needed to avoid future impacts of roadway projects. These will

	Planning Manager		for 500 feet? Greenburg, 4-5/Hall, 4-5/Dartmouth, 4-5/72nd, 4-5/Durham, 4-5 (setbacks possible).	need to be addressed at the time of development review.
89	Dick Bewersdorff, City of Tigard Current Planning Manager		Figure 8-12: Need definitive statement regarding intent and meaning and applicability of local street access crosses. Golf course in Summerfield.	The connection within Summerfield is shown as pedestrian connection only.
90	Dick Bewersdorff, City of Tigard Current Planning Manager		Table 8-6: Which are Metro and CIP?	Lettered projects are CIP, numbered projects are regional.
91	Dick Bewersdorff, City of Tigard Current Planning Manager		Specific access management for arterials. Funding needs to be established.	Some specific projects have the costs called out. Other general access management projects will occur with roadway projects or with development as it occurs.
92	Dick Bewersdorff, City of Tigard Current Planning Manager		How do we implement truck routes?	Truck routes are identified on Figure 8-25 which will be adopted as part of the Comprehensive Plan maps. The intent is to have these roads designed to be "truck friendly", i.e., 12 foot travel lanes, longer access spacing, 35 foot curb returns and pavement design that accommodates a larger share of trucks. This does not mean that trucks can not travel on other streets, just that the streets designated as truck routes are designed to accommodate higher amounts of truck traffic. The City could, through Ordinance, designate specific streets as "no through truck routes" which would limit truck traffic to local deliveries only.
93	Dick Bewersdorff, City of Tigard Current Planning Manager		Adopt the following maps?: Figure 5-1: Pedestrian Master Plan ♦ Has Duane looked at? ♦ Feasibility of proposed off-street paths ♦ Which side of creek on 74th? Figure 5-2: Pedestrian Action Plan Figure 6-2: Bicycle Master Plan ♦ Has Duane looked at? ♦ Framework Option Figure 6-3: Bicycle Action Plan Figure 8-3: Functional Classification System Figure 8-4 Proposed Neighborhood Routes Figures 8-12 – 8-17: Local Street Connectivity Maps	All of the maps will be adopted as part of the comprehensive plan

			Figure 8-19: Street Improvement Plan Figure 8-20: Intersection Improvement Locations Figure 8-21: Traffic Signal Master Plan Figure 8-25: Through Truck Routes	
94	Jason Tuck Program Coordinator	1-31-01	Tualatin supports the alternative of Hall Blvd. being extended to the south to connect the two communities. They also support the connection of bike lanes and sidewalks along that corridor. They also support the illustration of a bicycle connection to the south of the City in the location of 108th.	
95	Steve Oulman Land use and transportation planner for DLCD	2-5-01	The proposed comprehensive plan policies and implementation strategies reference the TPR requirements but no timeframe is provided for when Tigard will adopt the required measured. The city's action to adopt the TSP should include a schedule of future actions that will move the city to full compliance with the TPR. Recommends that the city also adopt an interim policy making it clear that until it adopts the required land use regulations changes, provisions of the TPR apply directly to all land use decisions and limited land use decisions.	Staff is not prepared at this time to offer a schedule of future activity as the actual adoption of the TSP itself is not set. Once the TSP is adopted, staff will evaluate the current and projected work load and prepare a schedule for updating to the Development Code to reflect the changes in the TSP and Comprehensive Plan.
96	Michael Hoglund, Director Metro Land Use and Transportation Planning Division	02-20-01	Metro recommends that Goal 2 of the draft plan be expanded to include the 2040 non-single occupancy vehicle modal targets contained in Table 1.3 of the 2000 RTP. The Chapter 10 description of specific strategies already provides a good complement to the modal targets, but should be linked to a specific policy statement that is consistent with the regional TDM policy.	Under Goal 2, Policy 7 should have text added to the sentence "...reduction strategies developed regionally, targeted to achieve non-single occupant vehicle levels outlined in Table 1.3 of the RTP."
97	Michael Hoglund, Director Metro Land Use and Transportation Planning Division	02-20-01	Concern about the level of service "D" standard for congestion which is much more aggressive than the minimum two-hour level of service in the RTP. The RTP standard is not a requirement as long as the local TSP demonstrates that it will not result in major	The actual improvements outlined in the Tigard TSP reflect level of service at the boundary between E and F with demand to capacity ratios of 1.0 at key intersections. The policy in Chapter 2, Goal 4, Policy 1 should be edited to reflect this and the recent regional recommendations to state: Level of service E (and demand to capacity ratio of 1.0 or less), Highway Capacity Manual

			motor vehicle capacity improvements that have the effect of shifting unacceptable levels of congestion into neighboring jurisdictions, result in capacity improvements to the principal arterial system that are not recommended in the RTP and increase SOV travel to a measurable degree that affects local consistency with modal targets. Proposal in the TSP to expand I-5 to 8 lanes between 217 and Wilsonville conflicts with the 2nd criterion specified above since it is not included in the RTP – recommends revising the assumption to acknowledge that the 2000 RTP has deferred a decision in the I-5 corridor until a more detailed corridor study can be completed. Metro strongly supports the combination of capacity improvements and other measures called for in the draft TSP for Highway 99W from 217 to Tualatin Road. However, Metro suggests consideration of a more specific adoption of the special Highway 99W level of service criteria called for in the 2000 RTP.	Chapters 15, 16 and 17 (or subsequent updated references) is recommended to balance provision of roadway capacity with level of service and funding. ODOT, Metro and Washington County performance standards should be considered on state or county facilities and for 2040 Concept Areas (as defined in Table 1.2 of the RTP).
98	Michael Hoglund, Director Metro Land Use and Transportation Planning Division	02-20-01	Suggests revising the motor vehicle classifications to be more consistent with the 2000 RTP by differentiating between major and minor arterials.	There are four differences between the draft Tigard TSP and the 2000 RTP. Each is addressed below with response to the difference: 1) Principal Arterial status is removed from Scholls Ferry Road and ORE 99W in Tigard in the RTP. This has no functional impact on these route and the draft Tigard TSP has been changed to be consist with the RTP. 2) RTP has Beef Bend as a collector in Tigard. The Tigard TSP will retain the recommended arterial status for Beef Bend Road consist with RTP designation to the west of the city limit since it provides for through traffic in the same capacity and is specifically targeted for access management to protect the functional integrity of this route, given proposed growth in the area and to avoid the impacts that have occurred on Bull Mountain Road with growth in

				the past 15 years. 3) Gaarde Street is shown in the RTP as a collector of regional significance and the draft Tigard TSP designates Gaarde as an arterial. Based upon the definitions in the draft TSP for arterial routes (as routes that connect between cities and regional routes) the segment from the Walnut/Murray connection to ORE 99W meets this functional designation. It is recommended to retain the arterial designation in the Tigard TSP. 4) The RTP has major and minor arterial designations. While these designations are useful for the regional level planning in the RTP, they are not part of the draft Tigard TSP functional classifications. This is described in detail on pages 8-4 through 8-20 in the TSP. In summary, the functional classification in the Tigard TSP defines a street function by its level of connectivity - not its size, volume, urban design or other features which are elements of a roadway but not its function. Without connectivity neither mobility nor access can be served. Distinguishing arterials as between being "more of an arterial than another" at the local level does not accomplish anything that designation as arterial does not already establish. For these reasons, major and minor designations are left for the RTP and concept area plans - but not the TSP
99	ADDITIONAL STAFF COMMENTS/ CHANGES			All maps will be amended to have a foot note that reads: "Transportation facilities in the Tigard Triangle and Washington Square planning areas have specific design regulations and classifications that may differ slightly from those in the TSP for consistency purposes. In these overlay areas, there are specific planning overlay documents for transportation design regulations"
100	ADDITIONAL STAFF COMMENTS/ CHANGES		The consultant and staff realized after the Planning Commission meeting that there is not a cross section for local commercial and residential streets.	The final TSP will show cross sections consistent with the current dimensional standards (50"ROW, 34' pavement, 5' sidewalks)
101	ADDITIONAL STAFF COMMENTS/ CHANGES		The consultant team and staff realized after the Planning Commission meeting that the Wall street alignment, as shown, may prevent efficient development of the parcel abutting Hall. Engineering staff commented that the alignment of Wall Street as it intersects Hall	A footnote has been added to figure 8-3 which states: "The exact position of dashed lines to address physical, access control, right-of-way and environmental constraints, as well as parcel consolidation, in alignment development." The amended figure 8-3 is attached

			Boulevard should be flexible to address the specific needs of parcel consolidation in the adjacent area, ODOT access spacing needs and physical constraints. A position 350 feet south of O'Mara would be acceptable.	
102	City Council	3-20-01	At the City Council worksession on the TSP, Council was presented the plan and given the opportunity to ask questions and provide comments. The Council raised the concern that the TSP and proposed comprehensive plan changes do not adequately address the transit needs in the community. The proposed comprehensive plan findings state that there is "significant" transit service in the community, while that is not perceived to be true. Several Council members cited specific areas that also need to be served that are not shown on Figure7-2:72nd/Sequoia/tigard Triangle, 135th/North Dakota, and Bonita The Council also asked to see a map representing the unserved areas that are not within ¼ mile of a transit facility.	Figure 7-2 has been amended as attached which shows a future transit connection on Bonita and which includes updated information from Tri-met's 10 year plan and the RTP. In addition, a new figure will be added (figure 7-3, attached) which shows the future transit coverage areas. Finally, the proposed comprehensive plan text, 8.1, 5th findings bullet, will be deleted.
103	Lynn Peterson, Strategic Planning Manager, Tri-met	5-16-01	The comments provided by Tri-met were for the TSP as well as in preparation of a meeting on May 24, 2001 to discuss transit service issues in Tigard. Staff has attempted to pull out the TSP comments from the general comments provided regarding service. Tri-met indicated that while the TSP is a 20 year document, they are most interested in improvements that can be implemented in the next 5 years, therefore the TSP should identify projects where Tri-met can be a partner to help implement. Tri-met would like to see the TSP create opportunities for signal pre-emption/queue jump lanes on major arterials to help streamline corridors. Tri-met has indicated	Staff is in the process of developing an action plan which will call for specific partnerships with Tri-met in order to get increased service within Tigard. The development of this action plan will require staff and Council to prioritized as discussed in Tri-met's comments. Due to the comments being submitted so late in the process, however, and issues still needing to be resolved, it is not recommended by staff to make additional changes to the TSP at this time. If it is determined after the creation of the action plan and working with Tri-met that specific improvements and priorities need to be identified, amendments and addendums can be made at a later date.

			that they hope to see the City view transit improvements in the same way that we view road improvements by identifying potential transit improvements, funding resources and priorities. Pedestrian element of the TSP should prioritize connections that connect pedestrian linkages to transit stops, and place highest priority on those connections that connect to major transit stops, light rail and/or commuter rail stations, transit centers and park-and-ride lots. The City may identify priority bus stops above and beyond the RTP and identify how these stops will be implemented. The commuter rail should be reflected in the TSP with pedestrian access needs, bus connection needs and whether the City believes the rail line should be pursued as an all day service in this corridor over the long term.	

Section II

This section includes all comments received at and after the November 20, 2001 City Council worksession meeting.

No.	Where/Who	Date	Comment	Response
104	Ken Scheckla, City Council member	11/20/01	Where is the Walnut/Ash road going to go and how does it hook up?	The consultant explained the locations shown on the TSP figures and how they relate to existing conditions
105	Ken Scheckla, City Council member	11/20/01	What is the timing of the prior transit mapping compared to the comments the Council made at the prior meeting and prior TSP planning mapping from 1998 through 2000?	RTP August 2000, Tri-met Choices for Livability 2000, Washington Council Plan 1988, September 2001 Route Service Update from Tri-met
106	Craig Dirksen, City Council member	11/20/01	Review Section 8.2.6 of the Comprehensive Plan	Staff reviewed this section and found that the proposed text is incomplete and needs to be revised. The proposed Comprehensive Plan changes include fix this section so that sit accurately reflects the intent.
107	Craig Dirksen, City	11/20/01	Map 8-14 seems confusing on the alignment	In order to alleviate confusion, this map will be modified to

	Council member		of Walnut/Ash	include only one arrow instead of the two (representing choices, not 2 connections) originally shown.
108	Craig Dirksen, City Council member	11/20/01	Most maps say Beef Bend for what is now Roy Rodgers Road	Yes, all of the maps say Beef Bend.

AGENDA ITEM # _____
FOR AGENDA OF January 8, 2002

CITY OF TIGARD, OREGON
COUNCIL AGENDA ITEM SUMMARY

ISSUE/AGENDA TITLE Consider Approval of an Ordinance Amending Chapter 13.04 of the Tigard Municipal Code

PREPARED BY: G. N. Berry/M Wareing DEPT HEAD OK _____ CITY MGR OK _____

ISSUE BEFORE THE COUNCIL

Consider the proposed ordinance amending Chapter 13.04; Local Improvements, General Procedures, of the Tigard Municipal Code.

STAFF RECOMMENDATION

Approve the proposed ordinance.

INFORMATION SUMMARY

Tigard municipal Code Chapter 13.04, Local Improvements, governs the formation of Local Improvement Districts and the assessment process. The proposed amendments to the chapter are intended to clarify the language and accurately explain the City's actual processes and procedures.

Districts may be initiated by the Council or by a majority of the benefiting owners. Once a district is initiated, section 13.04.020 currently requires preparation of a preliminary evaluation report on the feasibility of the proposed district. Current practice is to accomplish this through other reports and Council discussions. Consequently, the proposed revisions eliminate the required preliminary evaluation report unless Council directs otherwise.

The next step is the preparation of the Preliminary Engineer's Report and a recommendation to the Council. The report includes an estimated cost, a proposed method of spreading the assessment and the portion of the project cost that will be allocated to the district.

Section 13.04.030 currently provides that the Council may require that a fee be paid before preparation of the preliminary engineer's report. The revision would require that the fee be paid if the district was initiated by petition of property owners. This section has also been revised to clarify that a method of assessment and cost allocations included in the report are only tentative and may be altered. Revisions to section 13.04.060 require a written explanation for any changes to the proposed cost allocation or method of assessment.

Currently, Council has the ability to choose between a preassessment or final assessment procedure. Upon recommendation of the City Attorney, Section 13.040.060 is also being amended to remove references to

preassessments procedures. The preassessment procedure spreads the assessments using estimated costs. It is the City's practice to use the final assessment procedures, which spreads the assessments using actual final costs.

Revisions to section 13.04.070 are being proposed as well. The minimum assessment amount eligible for installment payments be increased from $25.00 to $500.00. Also, language has been added to specify how interim and final interest rates will be determined. During the review of the Code, it was discovered that an approved ordinance was referenced, but not added to the Code. The ordinance's language has been amended and added to the Code. The proposed amendments clarify the reassessment procedure and segregation of liens. Upon recommendation of the City Attorney, all references to deficit assessments and rebates and credits assessments have been removed, as these are part of the preassessment procedure.

Throughout the chapter, the duties currently assigned to the Community Development Director have been reassigned to the City Engineer to reflect the current administrative structure of the City.

OTHER ALTERNATIVES CONSIDERED

None

VISION TASK FORCE GOAL AND ACTION COMMITTEE STRATEGY

Not applicable

ATTACHMENT LIST

Chapter 13.04 with amendments

FISCAL NOTES

Not applicable

i:\citywide\sum\revisions to tmc 13.04s.doc

CITY OF TIGARD, OREGON

ORDINANCE NO. 02-

AN ORDINANCE AMENDING CHAPTER 13.04, LOCAL IMPROVEMENTS- GENERAL PROCEDURES, OF THE TIGARD MUNICIPAL CODE.

WHEREAS, the City Council finds that Chapter 13.04 of the Tigard Municipal Code should be updated;

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1: Chapter 13.04 is amended to read as follows:

Deleted language is shown by a ~~strikethrough~~ of language; added language shown by an <u>underline</u> of language.

Chapter 13.04 GENERAL PROCEDURES

Sections:

13.04.010 Definitions.
13.04.020 Initiation of local improvement district.
13.04.030 Fees--Report and recommendation--Resolution.
13.04.040 District formation--Public hearing--Ordinance.
13.04.050 Improvements--Final plan and specifications--Resolution accepting.
13.04.055 Public hearing on final plans and specifications.
13.04.060 Assessment--Notice and public hearing--Ordinance.
13.04.070 Finance and closure.
13.04.080 Administration.

13.04.010 Definitions.

As used in this chapter:

(a) "Local improvement" means:

(1) The grading, graveling, paving or other surfacing of any street, or opening, laying out, widening, extending, altering, changing the grade of or constructing any street;

(2) The construction or reconstruction of sidewalks;

(3) The installation of street lights;

(4) The installation of underground wiring or related equipment;

(5) The reconstruction or repair of any street improvement mentioned in this subsection;

(6) The construction, reconstruction or repair of any sanitary or storm sewer or water main;

(7) The acquisition, establishment, construction or reconstruction of any off-street motor vehicle parking facility;

(8) The construction, reconstruction, alteration, relocation or repair of any flood-control dike, dam, floodway or drainage facility;

(9) The construction, reconstruction, installation and equipping of a park, playground or neighborhood facility;

(10) Any other local improvement for which an assessment may be made on the property specially benefited.

(b) "Local improvement district" means the ~~property which~~properties, which ~~is~~ are to be assessed for the cost or part of the cost of local improvement and the ~~property~~ properties that have benefited by all or part of the improvement~~on which the local improvement is located~~.

(c) "Lot" means lot, block or parcel of land.

(d) "Owner" means the owner of the title to real property, or the contract purchaser of real property, of record as shown on the last available complete assessment roll in the office of county assessor.

~~(e) "Preassessment" means a method of assessing properties for local improvement districts prior to construction of the project, based upon the engineer's estimate (either the city or consulting engineer). (Ord. 85-40 §3, 1985).~~

13.04.020 Initiation of local improvement district.

(a) Initiation of District Formation Process.

(1) The ~~making of the local improvement and the~~ local improvement district formation process may be initiated in one of the following ways:

~~(A) The council may declare an emergency to exist.~~

~~(B)~~(A) The ~~council~~ Council may initiate the formation of the district and the making of the improvement on its own motion.

~~(C)~~(B) The property owners owning at least fifty percent of the property ~~benefitted~~benefited by the local improvement may by written petition request the ~~council~~ Council to form the district and make the improvement.

~~(2) The community development director~~ city engineer ~~shall prepare a preliminary evaluation report. The report shall:~~

~~(A) Identify known factors which support the formation of the district and improvement and known factors which make the district and improvement not feasible or not in the public interest;~~

~~(B) Recommend approval, approval with conditions or denial.~~

~~(3) The community development director~~ city engineer ~~shall submit the preliminary evaluation report to the council when the recommendation is for approval or for approval with conditions.~~

~~(4) The council may request on its own motion to have a preliminary evaluation report brought to it for action when the recommendation is for denial.~~

(b) Resolution to Prepare Preliminary Engineer's Report.

~~(1) The council shall consider the preliminary evaluation report. A public hearing is not required.~~

~~(2)~~(1) Based on a staff report prepared by the City Engineer addressing the factors in favor of and against formation of a local improvement district, ~~the preliminary evaluation report,~~ the ~~council~~ Council shall:

~~(A) Direct staff to terminate work on the proposed district and improvement; or~~

~~(B)~~(A) Adopt a resolution directing that ~~staff to prepare~~ a preliminary engineer's report be prepared; or~~.~~

(B) Direct staff to terminate work on the proposed district. The Council may also direct staff to terminate work on the local improvement.

~~(3)~~(2) The resolution directing that a preliminary engineer's report be prepared may include alternatives that the ~~council~~ Council intends for staff to consider. (Ord. 85-40 §4, 1985).

13.04.030 Fees--Report and recommendation--Resolution.

(a) ~~Fees. The council may adopt a fee schedule for the preparation of the preliminary engineer's report. The fee schedule shall apply to applications initiated under Section 13.04.020(a)(1)(C). The city shall not commence preparation of the report until the fee is paid to the city.~~ Fee for engineer's report. If the process is initiated by petition of property owners, the petitioners shall pay in advance the cost of preparing the engineer's report. Preparation of the engineer's report shall not commence until the fee is paid.

(b) Preliminary Engineer's Report.

(1) The ~~community development director~~ City Engineer shall have a preliminary engineer's report prepared. The report shall:

(A) Include the scope of the work, location of the proposed improvements, financial information, the proposed district boundaries, estimated costs, and other relevant information which go to the feasibility of the proposed improvement and the district. If it is determined that it is necessary to enter onto property within the proposed district for surveying or other engineering purposes, the preliminary engineer's report shall include an adequate description of the properties to be entered upon and a detailed description of the work to be done on the properties.

(B) Recommend approval, approval with conditions or denial.

(2) The engineer's report may contain a suggested allocation of costs to be paid by benefited property owners and may include a suggested method of spreading the anticipated assessment.

~~(2)~~(3) As an alternative to procedures outlined in subsection (b)(1) of this section, the ~~community development director~~ City Engineer may authorize entry upon any property within the proposed district pursuant to and for the purpose outlined in ORS 223.010. Within a reasonable time after the entry upon the land, the ~~community development director~~ City Engineer shall report to the ~~council~~ Council on the results of the entry.

(c) Project Priorities. The ~~city~~ City by rule may establish standards for prioritizing projects.

(d) Recommendation to Council.

(1) The ~~community development director~~ City Engineer shall prepare a ~~report~~ recommendation to the council. The ~~report~~ recommendation shall ~~be composed of two elements~~address:

(A) The project feasibility based on the preliminary engineer's report; ~~and~~

~~(B) The recommended project priority based on the standards for prioritizing projects.~~

(B) Any previously adopted rules establishing priorities of projects.

~~(2) The recommendation to the council shall be to form the district and to make the improvement or not to form the district and not to make the improvement.~~

(2) The recommendation may include a proposed apportionment of costs to be assessed against the benefited properties and may include a proposed method of spreading the assessment.

(e) Resolution of Intention.

(1) ~~The council shall receive the community development director's city engineer's recommendation.~~ The council shall consider the City Engineer's recommendation and shall decide whether to declare its intention to form the district and to make the public improvements. No public hearing shall be required.

(2) The resolution of intention shall:

(A) Describe the general nature, location and extent of the proposed local improvement and of the proposed local improvement district;

(B) Declare the ~~council's~~ Council's intention to make the improvement;

(C) Indicate the method and manner of carrying out the improvement;

(D) Contain an estimate of the probable total cost of the improvement;

~~(E) Indicate the method of assessment to be used to arrive at a fair apportionment of the whole or any portion of the cost of the improvement to the properties specially benefitted;~~

~~(F)~~(E) Set a public hearing on the improvement; and

~~(G)~~(F) Direct that notice be given of the proposed improvement and of the public hearing.

(3) The resolution of intention may set forth a proposed determination of the portion of the total costs to be assessed against the benefited properties and may set forth a proposed method of spreading the assessments. If a proposed allocation of costs or proposed method of spreading the assessments is included in the resolution, the resolution shall state that the allocation of costs and method of assessment are only tentative and that they may be altered by the City at the time of final assessment.

~~(3)~~(4) The resolution of intention may include alternative proposals relating to a proposed local

improvement; provided, however, that all of the information required for a particular local improvement shall be included for each alternative proposal. (Ord. 86-37 §1, 1986; Ord. 86-21 §1, 1986; Ord. 85-40 §5, 1985).

13.04.040 District formation--Public hearing--Ordinance.

(a) Alternative Procedures.

(1) The ~~council~~ Council may form an improvement district and initiate and construct a local improvement without publishing or mailing notice to the owners of specifically ~~benefitted~~benefited property and without holding a public hearing on the matter when all of the owners of the specifically ~~benefitted~~benefited and assessed property have signed a petition which has been directed and presented to the ~~council~~ Council requesting the improvement and formation of the district and the petitioners have signed a waiver of the right to remonstrate against the formation of the district and against the method for the spread of the assessment.

(2) The ~~council~~ Council shall publish notice, give individual mailed notice and hold a public hearing in all other situations. ~~where less than all of the owners have requested the improvement~~.

b) Notice of Hearing.

(1) The ~~community development director~~ City Engineer shall give at least ten days' notice to the property owners within the proposed district of the public hearing on the formation of the district and the local improvement by:

(A) Publication in a newspaper of general circulation within the ~~city~~City. ~~There shall be only~~ Only one publication is required; and

(B) Mailing a copy of the notice by first-class mail to the owner(s) of each lot affected by the proposed improvement.

(2) The notice shall contain:

(A) A general description of the proposed local improvement and the property to be specially ~~benefitted~~benefited thereby. The description of property need not be by metes and bounds but shall be such that an average person can determine from it the general location of the property;

(B) An estimate of the total cost of the improvement ~~and the portion anticipated to be paid for by special assessments;~~

(C) The date, time and place of the public hearing;

(D) A statement of a place where preliminary project design and other additional information concerning the improvement is available to the public; ~~and~~

(E) Information concerning any proposed allocation of costs or method of assessment included in the resolution of intention;

~~(E)~~(F) A statement that the purpose of the hearing is to hear remonstrances and that in order to be considered all written and oral remonstrances must be received by the close of the hearing;

(G) A statement that the Council may modify the proposed boundaries or proposed local improvement;

(H) A statement that the costs and any proposed allocation of costs or method of assessments are proposals only and that the actual assessment will be based on the actual costs and on a method of assessment to be determined only after the local improvement is completed.

~~(F)~~(I) Any other information the ~~council~~ Council may direct to be included.

(3) Any mistake, error, omission or failure with respect to mailing of notice shall not be jurisdictional or invalidate the local improvement proceedings.

(c) Hearing Procedure.

(1) The ~~council~~ Council shall hold a public hearing and shall consider oral and written testimony.

(2) The ~~council~~ Council may order the improvement to be made and the district to be formed as provided by this chapter.

(3) An order to form the district and to make an improvement shall be made by ordinance within ninety days after the date of the final hearing.

(d) Decision to Make Improvement and Form District.

(1) Remonstrances.

(A) The ~~council~~ Council shall not proceed with the formation of the district and the making of the improvement when the property owners owning two-thirds of the property area within this district to be specially assessed remonstrate against the improvement. This provision shall not apply in case of an emergency or to sidewalks as provided by the Charter.

(B) All remonstrances shall be filed with the ~~city~~ City ~~recorder~~ Recorder by the close of the initial public hearing. Thereafter, no remonstrance shall be considered except from persons receiving new notice. In situations where new notice is given, remonstrances shall be filed by the close of the public hearing for which new notice was given.

(C) In the case of multiple owners of a particular parcel of land, each remonstrating owner shall be counted as a fraction of a vote to the extent of their interest in the property.

(D) Any person acting as an attorney or agent with power to act in signing a remonstrance shall, in addition to describing the property affected, file with the remonstrance a copy in writing of the authority to represent the owner of the property.

(E) A remonstrance may be withdrawn any time up until the close of the hearing for the purpose of considering remonstrances.

(2) Council Discretion Not to Form District. The ~~council~~ Council may decide not to proceed with the formation of the district and the making of the improvement when the petition has been signed by less than one-half of the ~~benefitted~~benefited property owners, the district is deemed to be untimely or not in the best interests of the ~~c~~City.

(e) Modification to Scope of Improvement or District.

(1) Based on testimony at the hearing, the ~~council~~ Council may make modifications to the scope of the improvement or the district boundary.

(2) A new resolution of intent shall be adopted, new estimates made and a new individual notice mailed to the owners within the proposed district when the scope of the improvement is modified so that the assessment is likely to increase on one or more properties. A new hearing shall be held.

(3) A new resolution of intent shall not be required when properties are added or deleted from the proposed district and it is not likely to increase the assessment on one or more properties within the boundaries of the initial proposed district. The hearing shall be reopened when the proposed district is enlarged to include additional properties when the owners have not made a specific request in writing to be included within the district when the assessment will not be increased on other properties, individual notice shall be mailed only to the newly included property owners and the hearing shall be limited to testimony from the owners of the newly included properties. Ten days shall be given for remonstrance. All remonstrances from the newly included property shall be filed in writing with the ~~c~~City ~~r~~Recorder or withdrawn by the close of the reopened hearing.

(f) Formation of District. The ~~council~~ Council shall provide for the establishment of the local improvement district and making of the improvement by the adoption of an ordinance to form the district. (Ord. 87-13 §1, 1987; Ord. 85-40 §6, 1985).

13.04.050 Improvements--Final plan and specifications--Resolution accepting.

(a) The plans and specifications and improvements may be made in whole or in part by the ~~city~~City, by another governmental agency, by contract or by any combination thereof.

(b) The ~~community development director~~ City Engineer shall:

(1) Cause the necessary rights-of-way and easements to be acquired and the improvements to be made in accordance with the terms of the ordinance to form the district; and

(2) Cause final plans and specifications to be prepared and filed.

(A) Unless stated otherwise in the final plan and specifications, all technical requirements for the proposed improvements, such as curb heights, overlay thicknesses, etc., shall be those on file with the ~~city~~ City E~~e~~ngineer as the approved requirements for all construction within the ~~city~~City.

(B) A description of all necessary rights-of-way and easements shall be included in the final plan and specifications. Easements may be acquired for any necessary public use within the district and may include easements for access to properties that would otherwise have no public access or would have inadequate public access.

(c) The contract bid process shall be in accordance with the ~~city's~~ City's purchasing rules.

(d) The resolution accepting the final report which may include sections on the improvement, finance and legal summaries. (Ord. 86-21 §§3 and 4, 1986; Ord. 85-40 §7, 1985).

13.04.055 Public hearing on final plans and specifications.

(a) When ~~city~~ City ~~council~~ Council deems it in the best interest of the public, or when a material defect in the preliminary plans and specifications of the local improvement district has been found, a public hearing on the final plans and specifications may be called. The ~~council~~ Council may cure defects, or delete portions of the plans which have been declared void or set aside for any reason, and make necessary additions to the information in subsection (b)(1) of Section 13.04.030, the preliminary engineer's report.

(b) The notice of public hearing shall follow subsection (b) of Section 13.04.040.

(c) Hearing Procedure. The ~~city~~ City ~~council~~ Council shall consider oral and written testimony. (Ord. 86-21 §2, 1986: Ord. 85-40 §7.1, 1985).

13.04.060 Assessment--Notice and public hearing--Ordinance.

(a) Costs and Expenses.

(1) The costs and expenses of local improvements that may be assessed against the property specially ~~benefitted~~benefited by the improvement shall include, but not be limited to:

(A) The costs of any necessary property, right-of-way or easement acquisition and condemnation proceedings;

(B) Engineering and survey costs;

(C) The costs of construction and installation of improvements;

(D) The costs of preliminary studies, and reports of usable work done on previous proposals within the proposed district boundary which were not paid by the district because the proposal was abandoned;

(E) Advertising, legal, administrative, survey, engineering, notice, supervision, materials, labor, contracts, equipment, inspection and assessment costs;

(F) Financing costs including interest charges;

(G) Attorney's fees; and

(H) Any other necessary expenses;

(I) The costs of all administrative expenses, including legal fees, expended on a previously instituted improvement within the district boundary, where the previous improvement was abandoned, delayed by litigation or otherwise not completed as planned.

(b) Method of Assessment--Types of Assessment.

(1) The ~~council~~ Council in adopting a method of assessment of the costs of any local improvement may:

(A) Use any reasonable method of determining the extent of the local improvement district consistent with the benefits derived; and

(B) Use any reasonable method of apportioning the sum to be assessed between the properties determined to be specially ~~benefitted~~benefited.

(2) The ~~council~~ Council ~~may use either a preassessment procedure or a~~shall use a final assessment procedure. ~~Preassessment begins at the formation stage and assessments are based on the estimated costs.~~ Final assessment begins after the project is completed and is based on actual costs.

(3) ~~As an alternative to a preassessment procedure, the council may contract for indebtedness sufficient to cover the costs and expenses of the proposed local improvement.~~ Upon the completion of the improvement, the ~~benefitted~~benefited property owners will be finally assessed proportionate to the benefits derived from the improvement based on the method of assessment adopted by the City Council, and these assessments will be used to repay the indebtedness and the interest on the indebtedness. The final assessments under this procedure shall be eligible for payment in installments, as outlined in subsection (b) of Section 13.04.070 ~~below~~. The final assessments under this section shall be entered in the ~~city's~~ City's lien docket and shall become a lien on the assessed property, as outlined in subsection (a) of Section 13.04.080 ~~below~~. The liens created by these assessments may be placed as security for any indebtedness incurred by the ~~city~~ City to cover the costs of the proposed improvement.

(c) Assessment Procedure.

(1) ~~The community development director~~ Upon completion of the local improvement, the City Engineer shall:

(A) ~~Ascertain the preassessment, final assessment or deficit assessment as directed by the council;~~ Propose the portion of the total costs to be paid by the benefited properties and propose a method for spreading the assessments among the specially benefited properties.

(B) Prepare the proposed assessments for each lot within the improvement district based on the proposed allocation of costs and method of assessments;

(C) File the assessments with the F~~f~~inance D~~d~~irector; and

(D) Submit the assessments to the C~~c~~ouncil in the form of an assessment resolution.

(2) In preparing the proposed cost allocation and method of assessment, the City Engineer shall provide a written explanation if the proposed cost allocation or method of assessment differs from any cost allocation or method of assessment previously proposed.

~~(2)~~(3) The C~~c~~ouncil shall review the proposed assessments and may make modifications. The ~~council~~ Council shall adopt an assessment resolution and shall direct that notice of proposed assessments to be given and that a public hearing shall be held to consider objections.

~~(3)~~(4) Notice of the proposed assessments shall be given at least ten days prior to the hearing and it shall be mailed or personally delivered to the owner(s) of each property to be assessed or if personal service cannot be had, then by publication once a week for two consecutive weeks in a newspaper of general circulation in the ~~c~~City. The notice shall contain the following information:

(A) The name of the owner, the description of the property assessed, the total ~~estimated or actual project~~ cost assessed against ~~benefitted~~benefited property and the amount of the assessment against the described property;

(B) The proposed cost allocation and method of assessment.

~~(B)~~(C) A date and time by which written objections to the proposed assessment stating specifically the grounds for objection must be received and the date, time and place of a public hearing at which the ~~c~~Council will consider written objections; and

~~(C)~~(D) A statement that the assessment in the notice or as it may be modified by the ~~council~~ Council will be levied by the ~~council~~ Council after the hearing and that the assessment then will be charged against the property and be immediately payable in full or in installments, if applicable.

~~(4)~~(5) Supplementary notice of the proposed assessment and public hearing on it, in form and content to be determined by the F~~f~~inance D~~d~~irector, may also be published or posted by the F~~f~~inance D~~d~~irector.

~~(5)~~(6) Any mistake, error, omission or failure with respect to mailing of notice shall not be jurisdictional or invalidate the assessment proceedings, but there shall be no foreclosure or legal action to collect until notice has been given by personal service upon the property owner or, if personal service cannot be had, then by publication once a week for two consecutive weeks in a newspaper of general circulation in the C~~c~~ity.

~~(6)~~(7) The C~~c~~ouncil shall hold the public hearing on the proposed assessments to consider those objections filed in writing and may adopt, correct, modify or revise the proposed assessments. The ~~council~~ Council shall determine the amount of assessment to be charged against each lot within the local improvement district according to the special and peculiar benefits accruing thereto from the improvement.

~~(7)~~(8) The C~~c~~ouncil shall spread the assessment by ordinance. (Ord. 86-21 §§5 and 6, 1986; Ord. 85-40 §8, 1985).

13.04.070 Finance and closure.

(a) Notice of Assessment.

(1) The ~~f~~Finance ~~d~~Director shall send notice by first-class mail within ten days after the effective date of the ordinance spreading the assessment.

(2) The notice shall state the following:

(A) The effective date of the ordinance levying the assessment, the name of the owner of the property assessed, the amount of the specific assessment and a description of the property assessed;

(B) A statement that an application may be filed to pay the assessment in installments in accordance with the provisions of Section 13.04.~~050~~070(b);

(C) A statement that the entire amount of the assessment, less any part for which application to pay in installments is made, is due within thirty days of the date of the notice and, if unpaid on that date, will accrue interest and subject the property to foreclosure.

(3) Supplementary notice of assessment, in form and content to be determined by the ~~f~~Finance ~~d~~Director, may also be published or posted by the ~~f~~Finance ~~d~~Director.

(b) Installment Payments.

(1) The owner of any property assessed for an improvement in the sum of ~~twenty-five~~ five hundred dollars or more, at any time within ten days after notice of such assessment is first given, may file with the ~~f~~Finance ~~d~~Director a written application to pay in installments.

(2) The ~~f~~Finance ~~d~~Director shall accept the written application to pay in installments unless the amount remaining unpaid on the current assessment together with the unpaid ~~-~~balance of any previous assessments for improvements against the same property exceeds the real market value of the property.

(3) The written application shall:

(A) State that the applicant and property owner does waive all irregularities or

defects, jurisdictional or otherwise, in the proceedings to cause the improvement to be constructed or made for which the assessment is levied and in the apportionment of the cost; and

(B) State that the applicant or property owner understands the terms and conditions of the ~~c~~City's payment policies including the penalties for nonpayment.

(4) ~~(4) The council may adopt rules regarding the financing of improvements, assumption of payments resulting from a transfer of ownership, interest rates and service charges for late payments.~~ The Finance Director shall set interim and final interest rates for the financing of improvements, assumption of payments resulting from a transfer of ownership, and service charges for late payments.

(A) The interim interest rate shall be equal to the U.S Government Bond Ask Rate for the expected financing maturity date or an equal index as determined by the Finance Director as of the 1st of the month in which the application for installment financing is signed, plus 2%.

(B) The final interest shall be equal to the interest rate the City is charged on bonds issued to finance the assessment, plus 1.25%.

(5) The ~~c~~Council by resolution shall declare a payment due and payable after one year of delinquency, and the entire balance shall become immediately due. The resolution shall give the name of the owner then in default in the payment of the sums due, either principal or interest, together with a description of the property upon which the sums are owning and declaring the whole sum, both principal and interest, due and payable at once. The ~~f~~Finance ~~d~~Director is then directed to proceed at once to collect all unpaid installments and to enforce collection thereof, with all penalties added thereto, in the same manner as described in subsection (a)(2)(c) of this section.

(6) Whenever the owner of property changes through the sale or transfer of land, or the division of land, the total assessment balance plus interest may be assumed subject to the following conditions ~~as set forth in Ordinance No. 85-12.~~. The City shall not allow an assumption, if the assessment balance is less than $3,000.00. An assumption fee, which shall be set by resolution of the City Council, and fees for recording the lien and the release of the lien will be charged. The City shall not allow an assumption, if the buyer of the property has a history of slow or delinquent payment on other debt to the City. Assumptions for assessments shall be at the rate charged to the owner of the property at time of assessment.

~~(c) Deficit Assessments.~~

~~(1) The council may make a deficit assessment for additional costs when the initial assessment was based on estimated costs and the actual cost exceeds the estimated cost.~~

~~(2) The community development director city engineer shall follow the procedures set forth in Section 13.04.060.~~

~~(3) The deficit assessment shall be in the same proportional share as the initial assessment.~~

~~(4) The deficit assessment shall be spread by ordinance.~~

~~(5) The finance director shall enter the deficit assessment on the city's lien docket as an increase in the property owner's original assessment.~~

~~(d) Rebates and Credits.~~

~~(1) The community development director city engineer shall, if the final cost is less than the estimate:~~

~~(A) Ascertain the total amount of excess assessment;~~
~~(B) Prepare the proposed credit amounts for each lot within the improvement district using the method of assessment adopted by the council in Section 13.04.060(c)(6);~~

~~(C) File the credit amounts with the finance director; and~~

~~(D) Submit the credit amounts to the council in the form of an ordinance.~~

~~(2) The council shall declare the excess assessment by ordinance.~~

~~(3) The finance director shall rebate or credit the over-assessment according to the following process:~~

~~(A) In the event there is an outstanding balance due, a credit shall be entered into the city lien docket as an adjustment to the property owner's assessment lien account.~~

~~(B) In the event the original assessment has been paid in full, the current property owner shall be entitled to a cash refund of the excess amount paid.~~

~~(e)~~(c) Reassessments.

(1) The ~~c~~Council may make (1) a new assessment or (2) a reassessment in the manner provided by this subsection when:

(A) The ~~c~~Council is in doubt as to the validity of all or a part of ~~such~~ an assessment by reason of ~~such~~ defects in procedure; or

(B) All or a part of any assessment has been or is declared void or set aside for any reason or its enforcement is refused by a court having jurisdiction.

(2) Basis for Amount and Method of Reassessment.
(A) The reassessment shall be based upon the special and peculiar benefit of the improvement to the respective lots at the time of the original making of the improvement.

(B) The amount of the reassessment shall not be limited to the amount of the original final assessment, but the property embraced in the reassessment shall be limited to property embraced in the original final assessment. ~~except that property on which the original assessment was paid in full shall not be included in the reassessment~~. If a property has paid the original final assessment in full, that property shall not have to pay the reassessment. In determining the amount of the reassessment, the Council shall not increase the amount assessed against any property based on the fact that one or more properties have paid the original assessment in full.

(C) Interest from the date of delinquency of the original final assessment may be added by the ~~c~~Council to the reassessment in cases where the property was included in the original final assessment, but such interest shall not apply to any portion of the reassessment that exceeds the amount of the original final assessment.

(D) The reassessment shall be made in an equitable manner as nearly as may be in accordance with the law in force at the time the local improvement was made, but the ~~c~~Council may adopt a different plan of apportioning benefits or exclude portions of the district when in its judgment it is essential to secure an equitable assessment.

(E) Credit shall be allowed on the ~~new~~ reassessment for all payments made on the original assessment.

~~(3) Effect of Reassessment. The reassessment shall be legally binding except that reassessment shall not be made in case of any improvement where in a remonstrance sufficient in law to defeat it has been duly filed prior to the making of the improvement.~~

(4) Procedure.

(A) The reassessment shall be initiated by adoption of a resolution which:

(i) Designates the improvement as to which a reassessment is contemplated;

(ii) Describes the boundaries of the district that the ~~c~~Council contemplates for the reassessment; and

(iii) Directs the ~~f~~Finance ~~d~~Director to prepare a proposed reassessment upon the property included within the district ~~and~~ subject to reassessment.

(B) Upon passage of the reassessment resolution, the ~~f~~Finance ~~d~~Director shall prepare the proposed reassessment and file it in the office of the ~~c~~City ~~r~~Recorder.

(C) The ~~f~~Finance ~~d~~Director shall give notice of the reassessment by not less than four successive publications in a newspaper published in the ~~c~~City and, if there is no newspaper published in the ~~c~~City, in a newspaper to be designated by the ~~c~~Council.

(D) The notice shall state:

(i) The proposed reassessment is on file in the office of the ~~c~~City ~~r~~Recorder;

(ii) The date of the passage of the resolution authorizing it;

(iii) The boundaries of the district or a statement of the property affected by the proposed reassessment; and

(iv) The date, time and place where the ~~c~~Council will hear and consider objections to the proposed reassessment by any party aggrieved thereby.

(E) The ~~f~~Finance ~~d~~Director shall mail within five days after the first date of publication of notice to the owner of each lot affected, a copy of the notice of the proposed reassessment as provided in paragraph (D) of this subdivision together with a statement of the amount proposed to be charged against the lot.

(F) Any person having an interest in the affected property may, within ten days from the day of the last insertion of the printed notice, file in writing with the City ~~r~~Recorder objections against the proposed reassessment.

(G) The ~~c~~Council shall hear and determine all objections filed under paragraph (E) of this subdivision. The ~~c~~Council may continue the hearing to correct, modify or revise the proposed reassessment or set it aside and order a new proposed assessment. A change which results in an increase in the amount proposed to be charged against any property shall require:

(i) New published notice for not less than two successive insertions in a newspaper as provided by paragraphs (C) and (D) of this subdivision; and

(ii) New individual notice as provided under paragraph (E) of this subdivision to the owners of property against which the amount of assessment is proposed to be increased.

(H) In situations where paragraph (G) of this subdivision applies, the ~~c~~Council shall not take action until at least five days after the date of the last publication.

(5) Reassessment Ordinance--Lien Docket Entry-Crediting Prior Payments.

(A) The reassessment shall be by ordinance.

(B) The reassessment shall be entered into the ~~c~~City's lien docket.

(C) All provisions for bonding and paying by installments shall be applicable and such ~~c~~City liens shall be enforced and collected in the manner provided for collection of liens for an original improvement.

(D) All sums paid upon the ~~former~~ original final assessment or ~~any previous assessment~~ for the same improvement shall be credited to the property on account of which it was paid and as of the date of payment.

(f) Abandonment of Proceedings.

(1) The ~~c~~Council shall have full power and authority to abandon and rescind proceedings for local improvements made pursuant to this chapter at any time prior to the full completion of the improvements.

(2) If the Council has abandoned and rescinded the district, l~~L~~iens which have been assessed upon any property under the provisions of this chapter shall be canceled and payments made on the improvements shall be refunded to the person or the person's assigns or successors, paying the same.

(g) Curative Provisions.

(1) No improvement assessment shall be rendered invalid by a failure to:

(A) Provide all of the information required to be in any ~~c~~City ~~e~~Engineer's or other report, the resolution of intention, the assessment ordinance, reassessment, the ~~c~~City lien docket or notice required to be mailed, published or posted;

(B) Give in any report, in the proposed assessment, in the assessment ordinance, in the lien docket or elsewhere in the proceedings, the name of the owner of any lot, tract or parcel of land or the name of any person having a lien upon or interest therein, or by a mistake in the name of any such person having a lien upon or interest in such property, or by reason of any error, mistake, delay, omission, irregularity or other act, jurisdictional or otherwise, in any of the proceedings or steps specified in this paragraph;

(C) The ~~c~~Council shall have the power and authority to remedy and to correct all matters by suitable action and proceedings.

(2) Any mistake, error, omission or failure with respect to notice shall not be jurisdictional or invalidate the proceedings. (Ord. 96-26; Ord. 85-40 §9, 1985)

13.04.080 Administration.

(a) Entry In City Lien Docket.

(1) The ~~f~~Finance ~~d~~Director shall enter in the ~~c~~City lien docket:

(A) A statement of the amounts assessed on each particular lot, parcel of land or portion thereof;

(B) A description of the improvement;

(C) The name of the owner(s); and

(D) The date of the assessment ordinance.

(2) Upon entry into the lien docket, the amount entered shall become a lien on the respective lots, parcels of land or portions thereof, which have been assessed for the improvement.

(3) All assessment liens of the ~~c~~City shall be superior and prior to all other liens and encumbrances on the property.

(b) Filing of Resolution and Ordinance.

(1) The ~~f~~Finance ~~d~~Director shall file a copy of the ordinance to form the district establishing the local improvement district and the ordinance spreading the assessment with the ~~d~~Director of ~~r~~Records and ~~e~~Elections of Washington County.

(2) Failure to file the resolution or ordinance shall not invalidate or affect any proceedings in connection with the local improvement district and shall not impose any liability on the ~~c~~City or any official, officer or employee of the ~~c~~City.

(c) Segregation of Liens.

(1) A lien against the real property in favor of the ~~c~~City may be segregated on application by the owner(s) subject to satisfying the provisions of this section and the rules adopted by the ~~c~~Council or by action of the City.

(2) Applications shall be made to the ~~f~~Finance ~~d~~Director and shall include:

(A) A legal description of each tract to be segregated;

(B) The names of the owner of the tracts and the name of each person who will own each parcel should the segregation be approved; and

(C) A certificate from the ~~c~~County ~~a~~Assessor showing the assessed valuation of each tract as of January 1st of the year in which the segregation is requested, if available; otherwise, as of January 1st of the preceding year.

(3) No segregation shall be made unless each part of the original tract of land after the

segregation has a real market value of one hundred twenty percent or more of the amount of the lien as to each segregated tract concerned.

(4) The ~~finance~~ Finance ~~d~~Director shall compute a segregation of the lien against the real property on the same basis as it was originally computed and apportioned and shall record the segregation in the lien docket.

(5) ~~(5)~~ A segregation for the purpose of a lease shall remain the primary obligation of the property owner.

(6) Failure to apply for segregation shall result in the lien placed upon all lots or parcels. When a payment against the assessments is made it will reduce the amount of all liens.

(d) Application of Chapter. The provisions of this chapter shall apply to all future local improvement districts and to the extent further actions or proceedings may be required, to all existing districts.

(e) Authority to Adopt Rules. The ~~c~~Council may adopt rules it deems necessary to carry out the formation of local improvement districts and the making of local improvements. (Ord. 96-26; Ord. 85-40 §10, 1985). ■

SECTION 2: This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor, and posting by the City Recorder.

PASSED: By _____ vote of all Council members present after being read by number and title only, this _____ day of _____, 2002.

_____
Catherine Wheatley, City Recorder

APPROVED: By Tigard City Council this _____ day of _____, 2002.

_____
James E. Griffith, Mayor

Approved as to form:

_____
City Attorney

_____
Date