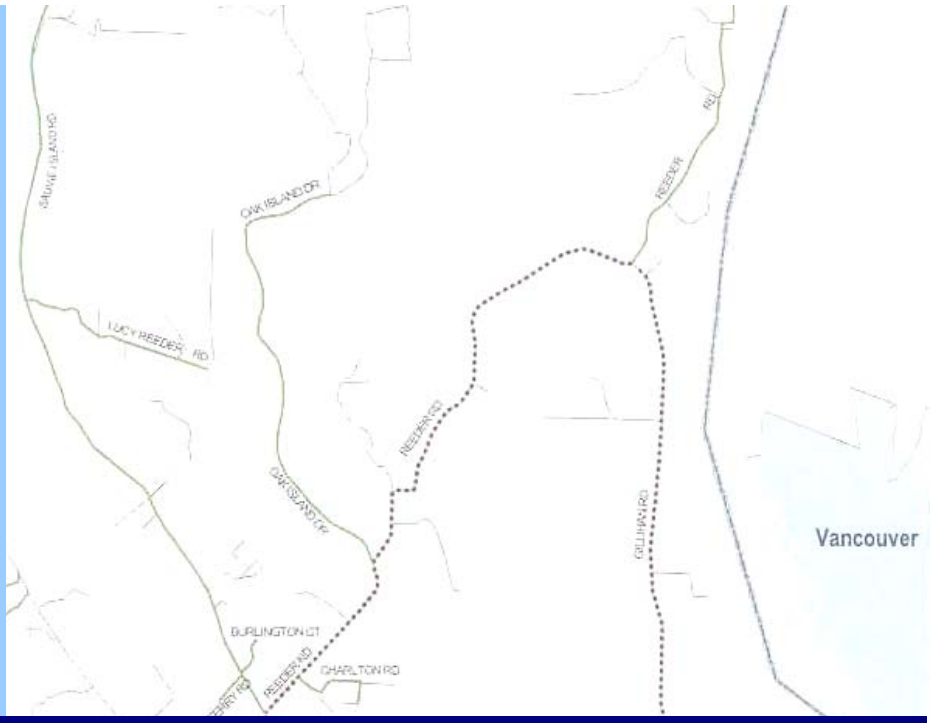
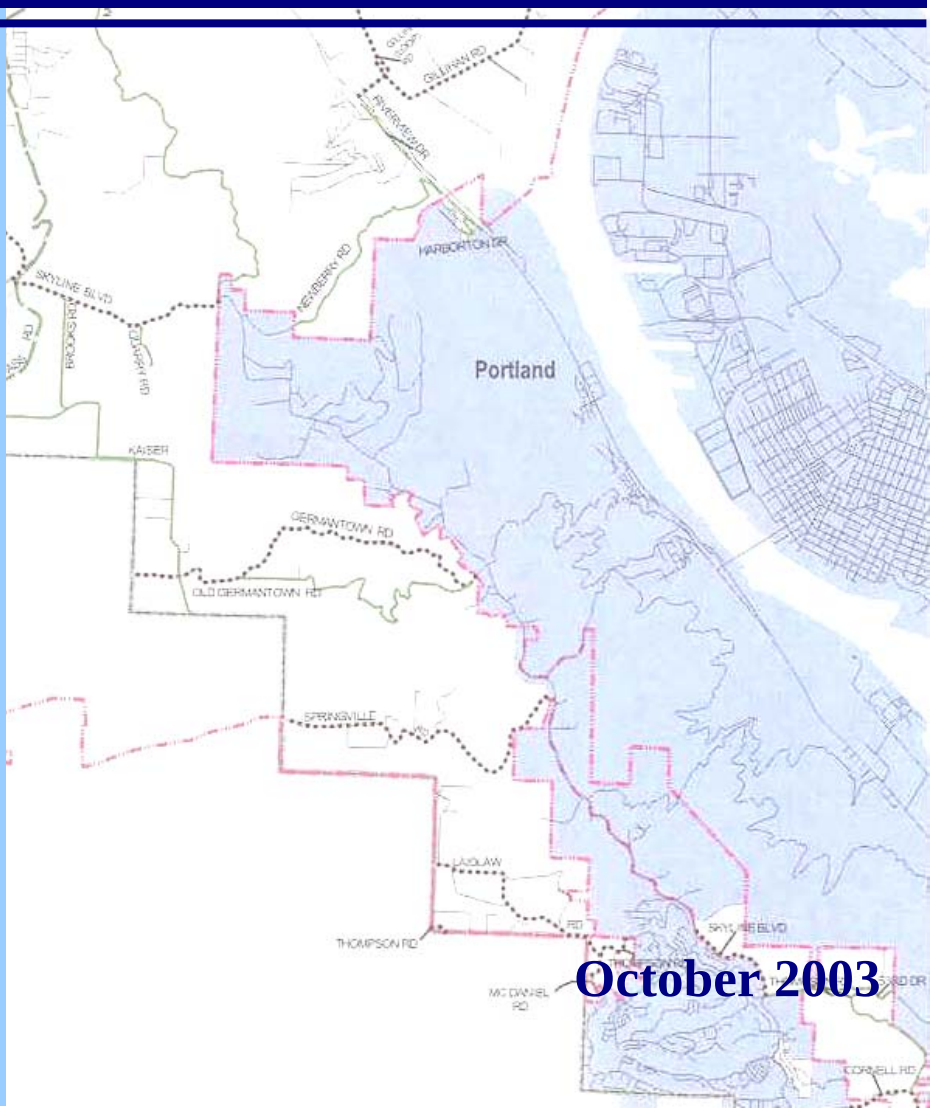


Multnomah County

Functional Classification of Trafficways Findings and Recommendations Technical Report



DAVID EVANS AND ASSOCIATES INC.

October 2003

Multnomah County
Functional Classification of Trafficways
Findings and Recommendations Technical Report

Prepared for:
Multnomah County Transportation Division
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Portland, Oregon

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Portland, Oregon

October 2003

List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic
CIP	Capital Improvement Program
EMCTC	East Multnomah County Transportation Committee
FHWA	U.S. Department of Transportation Federal Highway Administration
I-84	Interstate 84
IGA	Intergovernmental Agreement
mm	millimeter
ODOT	Oregon Department of Transportation
RTP	Regional Transportation Plan
TAC	Technical Advisory Committee
TGM	Transportation Growth Management
TPR	Transportation Planning Rule
TSP	Transportation System Plan

Executive Summary

The purpose of the project is to review and evaluate the functional classification of roadways in the county. The intent of the trafficways classification is to support the operation of a safe and efficient system, to provide efficient and economical maintenance and repair of existing roadways, and to preserve adequate right-of-way for future transportation system improvements.

The project involved two steps. One step was comparing the Comprehensive Framework Plan Policy 34, which contains the definitions and descriptions of functional classifications, to the Oregon Transportation Planning Rule (which implements Statewide Planning Goal 12). The second step was comparing the County's classifications to federal, state (Oregon Department of Transportation), regional (Metro), and local (Fairview, Gresham, Portland, Troutdale, Wood Village) classifications. Representatives from Multnomah County, ODOT, Tri-Met, Metro, Fairview, Gresham, Portland, Troutdale, and Wood Village served on the Technical Advisory Committee.

The project area includes all of Multnomah County, including both urban (excluding the city of Portland) and unincorporated areas. The project focuses more on the urbanized east county area than the west county area because of substantial growth and interface between multiple jurisdictions in east county.

Multnomah County Comprehensive Framework Plan Policy 34: Trafficways

1. Add definition of Industrial Streets to overlay classifications
2. Add definition of Green Streets to overlay classifications
3. Amend policies and strategies to comply with the Transportation Planning Rule

Multnomah County Design Standards, Part I—Design Manual, Section 2—Geometric Design

1. Amend cross sections to conform with standards in Section 4—Pavement Design
2. Amend Principal Arterial to allow two turn lanes as needed at intersections
3. Amend Major Arterial to increase planter strip width to 7 feet to comply with Metro's standard
4. Add Regional Street standards
5. Add Community Street standards
6. Add Green Street standards (new functional classification overlay)
7. Amend Section 2.3, Intersection Design Standards to ensure that adequate right-of-way is provided at intersections to comply with the Americans with Disabilities Act

Multnomah County Functional Classifications of Trafficways Map and Database

1. Recommended amendments based on review and comparison of functional classification

Roadway	Segment	Current Classification	Recommended Classification
242nd Ave (Hogan)	Burnside Rd to Glisan St	Major Arterial	Principal Arterial
238th Dr	North of I-84	Major Collector	Minor Arterial
Sandy Blvd	207th Ave to end	Major Collector	Minor Arterial
207th Ave	North of I-84	Major Collector	Major Arterial
Arata Rd		Neighborhood Collector	Major Collector
257th Ave (Kane)	Powell Valley Rd to Orient Dr	Minor Arterial	Major Arterial
Proposed 174th connector	Entire roadway	Not classified	Minor Arterial
Bluff Rd	Entire roadway	Local	Rural Collector

2. Recommended amendments to correct errors

Roadway	Segment	Incorrect Classification	Correct Classification
District 4			
Barbara Welch Rd	Portland limits and County limits	Neighborhood Collector	Rural Local
Butler Rd	Gresham limits to 242nd Ave	Neighborhood Collector	Rural Local
Chase Rd	287th Ave to 302nd Ave	Rural Arterial	Rural Local
Division St/Dr	to 257th Ave	Major Arterial	Major Collector
	268th Ave to Gresham limits	Rural Local	Minor Arterial
	east of Troutdale Rd to 302nd Ave	Minor Arterial, Rural Arterial	Rural Collector
	East of Oxbow Dr	Rural Collector	Rural Local
Jenne Ln	Entire roadway	Urban Local	Rural Local
Orient Dr	257th Ave to Gresham limits	Minor Arterial	Major Arterial
Troutdale Rd	Division Dr to Anderson Rd	Major Collector	Rural Arterial
181st Ave	Sandy Blvd to Airport Wy	Minor Arterial	Major Arterial
District 5			
Brower Rd	Entire roadway	Local Street	Rural Collector
Lampert Rd	Entire roadway	Rural Collector	Rural Local
Woodard Rd	HCRH to Troutdale limits	Rural Collector	Urban Local

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1.0 Introduction

1.1 Purpose

The purpose of the Multnomah County Functional Classification of Trafficways Findings and Recommendations Technical Report is to provide the basis for amendment of the Multnomah County Comprehensive Framework Plan and the Functional Classification of Trafficways map. The report compares Multnomah County functional classifications to federal (U.S. Department of Transportation Federal Highway Administration [FHWA]), state (Oregon Department of Transportation [ODOT]), regional (Metro), and cities within Multnomah County (Fairview, Gresham, Portland, Troutdale, Wood Village) functional classifications; identifies discrepancies; and remedies discrepancies where possible. The intent of the trafficways classification is to support the operation of a safe and efficient system, to provide efficient and economical maintenance and repair of existing roadways, and to preserve adequate right-of-way for future transportation system improvements.

1.2 Scope

The project area includes all of Multnomah County, including both urban (excluding the city of Portland) and unincorporated areas. The project focuses more on the urbanized east county area than the west county area because of substantial growth and interface between multiple jurisdictions in east county, including the cities of Fairview, Gresham, Troutdale, and Wood Village, as well as the Pleasant Valley area.

This report provides:

- A comparison of functional classification definitions and descriptions between Multnomah County and other jurisdictions;
- A comparison of functional classifications (designations of trafficways) between Multnomah County and other jurisdictions;
- A comparison of street standards between Multnomah County and other jurisdictions for different functional classifications;
- Recommended classification changes based on the comparison (the project includes recommending amendments to the adopted Multnomah County Functional Classifications of Trafficways map and database) (see Section 3.0);
- Recommended amendments to Comprehensive Framework Plan Policy 34: Trafficways functional classification definitions and descriptions based on the comparative evaluation (see Section 2.0 and Appendix E);
- An evaluation of Comprehensive Framework Plan Policy 34: Trafficways policies and strategies compliance with the Transportation Planning Rule (TPR) (see Section 5.0 and Appendix E);
- Recommended amendments to the Comprehensive Framework Plan Policy 34 policies and strategies based on the TPR evaluation (see Section 5.0 and Appendix E);
- Recommended amendments to Multnomah County Design Standards, Part I-Design Manual (see Section 4.0);
- A discussion of system-wide issues raised at group or individual Technical Advisory Committee (TAC) meetings (see Section 6.0);
- A discussion of roadway intersection/segment-specific issues raised at group or individual TAC meetings (see Section 6.0); and

- Recommendations for future action for the East Multnomah County Transportation Committee (EMCTC), Metro's Regional Transportation Plan (RTP) update, and other studies (see Section 6.0).

1.3 Background

In 1995, the "Multnomah County Urban Roads Functional Classification Study" (Bernstein) was prepared to provide a system and link analysis relating planned land uses to the planned transportation system and to recommend amendments to Policy 34. The 1995 study based recommended functional classification amendments on analyses of existing and future population and employment, travel demands, and traffic conditions; recommended policy updates; and identified classification inconsistencies with other jurisdictions.

This report is intended, in part, to serve as an update of the 1995 report. This report incorporates information, classifications, definitions, and standards from the 2000 RTP, cities' Transportation System Plans (TSPs), and Pleasant Valley plan. Therefore it incorporates the updated modeling done for these documents. However, no existing or future population, employment, travel demand, or traffic condition analyses were conducted for this report.

For the project, a TAC was formed. It includes representatives from Multnomah County, ODOT, Tri-Met, Metro, Fairview, Gresham, Portland, Troutdale, and Wood Village. The TAC met three times as a group prior to the preparation of this draft report. The consultant also met individually with the local jurisdiction representatives.

2.0 Functional Classification Definitions and Descriptions

The Multnomah County Comprehensive Framework Plan Policy 34 ("Policy 34") functional classification definitions and descriptions were compared with those of the other jurisdictions to identify differences. The first page of the table in Appendix A summarizes the different functional classification categories among the jurisdictions. The following pages contain the corresponding definitions and descriptions for each classification and jurisdiction.

The table in Appendix A is broken down into several categories in order to ease comparison. They are: connectivity; volume and posted speed; access; pedestrian and bicycle facilities; transit facilities; and freight. Connectivity refers to the intended origins and destinations of trips on the roadway and the size and type of areas the roadway is intended to connect. Average daily traffic (ADT) ranges are given for Multnomah County, Gresham, and Pleasant Valley. American Association of State Highway and Transportation Officials (AASHTO) provides percentages of total traffic volume a classification should carry. The access category describes the degree to which adjacent properties are allowed or encouraged to have direct access to the roadway classification. The pedestrian and bicycle, and transit categories include information about whether such facilities may be provided, and what type is appropriate. The freight category includes available information about types and quantity of truck movement.

Although the maps and tables in the Fairview and Troutdale TSPs designate roadways as major and minor arterials and collectors, the TSPs provide only definitions for the broad arterial, collector, and neighborhood street categories. Therefore, Table 1b does not include definitions and descriptions for the major and minor classifications. However, the Table 1a summary does include the major and minor categories in order to compare across jurisdictions.

Multnomah County has five functional classification overlay designations: scenic route, regional boulevard, community boulevard, regional street, and community street.

Multnomah County adopted Metro's descriptions of the boulevard and street overlays. Boulevards are designated on roadways at intensely developed activity centers. Design standards intend to promote multi-modal travel. Regional boulevards can be applied to the major arterial classification while community boulevards can be applied to minor arterials.

The street overlays typically are more vehicle-oriented and emphasize vehicle mobility in comparison to boulevards. Regional streets can be applied to the major arterial roads, while the community streets can be applied to minor arterials. However, the County does not have any design standards for regional or community streets.

2.1 Comparison among Jurisdictions

In terms of connectivity and access control, the definitions across the jurisdictions are fairly consistent. Gresham has a boulevard functional classification that is the equivalent of a major arterial, while Multnomah County and Metro treat a boulevard as a street design/overlay designation. Gresham, Pleasant Valley, Troutdale, and Portland do not distinguish an expressway nor define it as a principal arterial. Neither the Pleasant Valley plan nor the City of Troutdale have principal arterial classifications. For the County, the differences between the principal and major and minor arterial and major collector classifications are in terms of connectivity and access, not the design standards (see Section 4.0 and Appendix C). All jurisdictions except Metro and the federal system have a neighborhood or community level street that functions as a minor collector.

The main discrepancies are between the City of Gresham's and the Pleasant Valley Plan's major collector/collector and neighborhood collector design volumes. The Pleasant Valley Plan shows 1,000 to 10,000 ADT for collector. Gresham shows 10,000 to 25,000 ADT. For Community Street/Neighborhood Collector, Pleasant Valley shows less than 5,000 ADT; whereas Gresham shows 3,500 to 10,000 ADT. County ADT is 2000-12,000 for major collector and 500-4,500 for neighborhood collector, which are consistent with Pleasant Valley target volumes.

2.2 Additional Functional Classifications Needed

The County's current functional classifications and overlays do not address the specific needs of industrial areas nor do they provide any "green" street options. As described below, both should be considered for new classifications or overlays.

As discussed in Section 6.2 of this document, there are segments of roadway classified as collector that serve industrial areas. County street design standards do not allow for sufficient asphalt (125 millimeter [mm]) and base (325 mm) to accommodate truck traffic on minor collectors or major collectors (150 mm asphalt; 375 mm base). Classifying all roadways that serve industrial areas as arterials would require the roadways to have an excessive amount of right-of-way, unnecessarily thick section, and restricted access.

Metro's green street standards include "…features such as street trees, landscaped swales and special paving materials that limit stormwater runoff within the street right-of-way, which in turn, helps protect stream habitat" (Metro, 2002b).

2.3 Inconsistencies in Design Standards and References

The cross sections in Section 2 of the Multnomah County Design Standards, Part 1–Design Manual, conflict with those in Section 4. All the cross sections in Section 2 show 330 mm of 25-0 mm of aggregate base material. Section 4 requires 425 mm for arterial, 375 mm for major collector, and 325 mm for collector and local. Section 2 indicates 150 mm of asphaltic concrete for arterial and boulevard and 102 mm for collector, local, and rural. Another inconsistency exists between Policy 34 and the Design Manual regarding standards for overlay designations. The Policy 34 definitions of Boulevard and Street overlay designations reference the County's design standards, but the design manual includes standards only for boulevards.

2.4 Recommended Amendments to Multnomah County Comprehensive Framework Plan Policy 34: Trafficways—Functional Classifications and Design Standards, Part I—Design Manual

While none of the discrepancies discussed in Section 2.1 require amending the County Comprehensive Framework Plan or trafficways map; some inconsistencies within the Design Manual and additional classifications should be addressed as noted in Sections 2.2 and 2.3. The Design Manual needs to be updated with standards for Streets overlays, and Policy 34 of the Comprehensive Framework Plan and the Design Manual needs to be amended to include two new overlay designations: Industrial Streets and Green Streets.

Multnomah County design standards should be amended to include standards for Regional Street and Community Street in order to implement these overlays.

A new functional classification overlay is proposed for collectors serving truck traffic. Proposed language for the overlay is shown in Appendix E. The two roadway segments of immediate concern are both currently classified as major collectors. Sandy Boulevard east of 207th Avenue is proposed to be reclassified as a minor arterial. The other roadway is Marine Drive in Troutdale. The Design Manual does not need to be changed, as the new overlay would apply two existing arterial section standards to collectors.

Policy 34 should include a green street overlay as per Metro's guidelines. Proposed language for the overlay is shown in Appendix E. The overlay would be applied as appropriate according to location and size of the proposed development. Green Street standards, following Metro's "Green Streets" and "Creating Livable Streets" handbooks, also need to be added to the Design Manual.

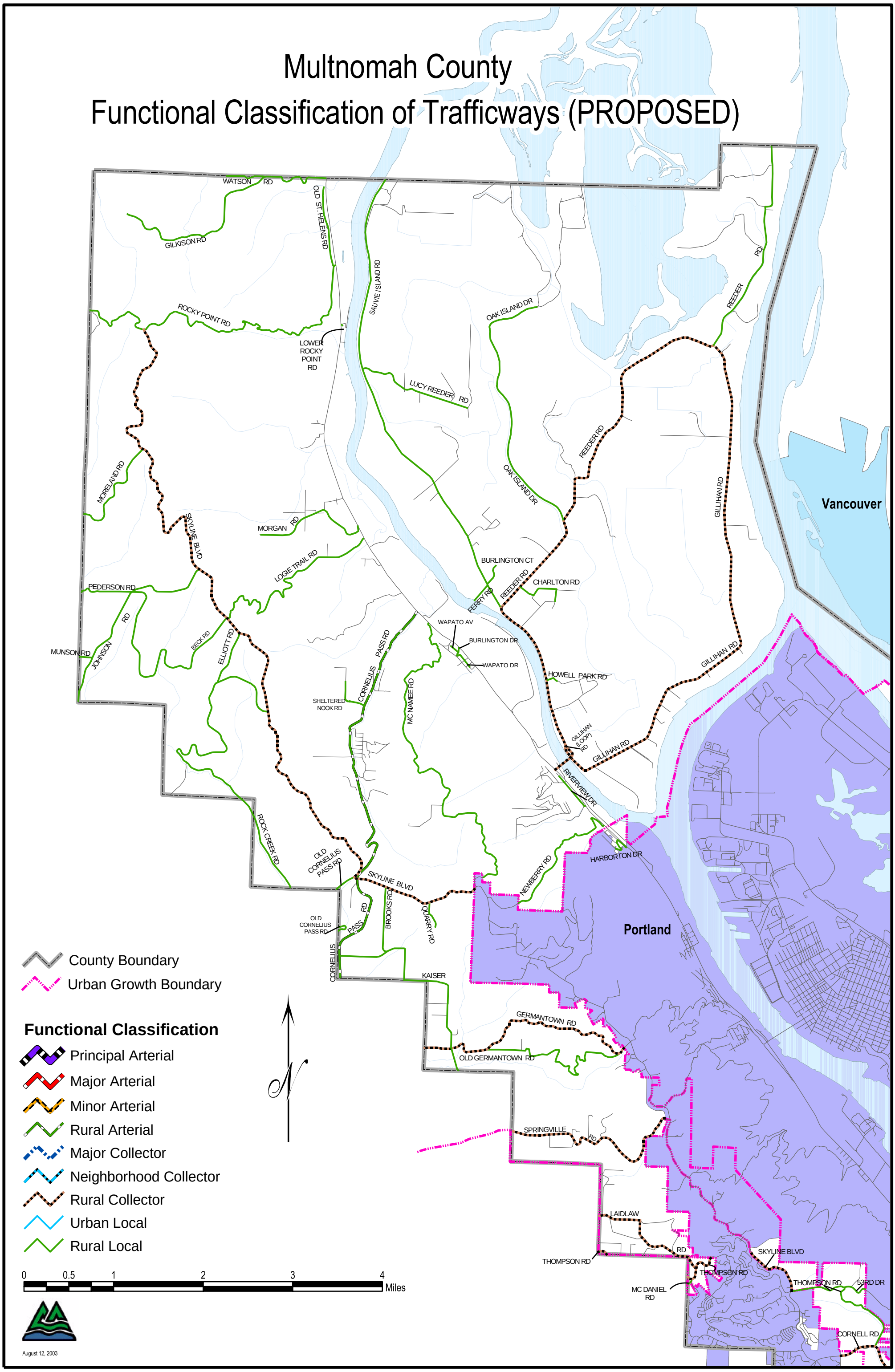
Finally, the County needs to amend the Multnomah County Design Standards, Part I – Design Manual, Section 2 – Geometric Design cross sections to conform with the standards in Section 4 – Pavement Design.

3.0 Functional Classifications of Roadways (Designations)

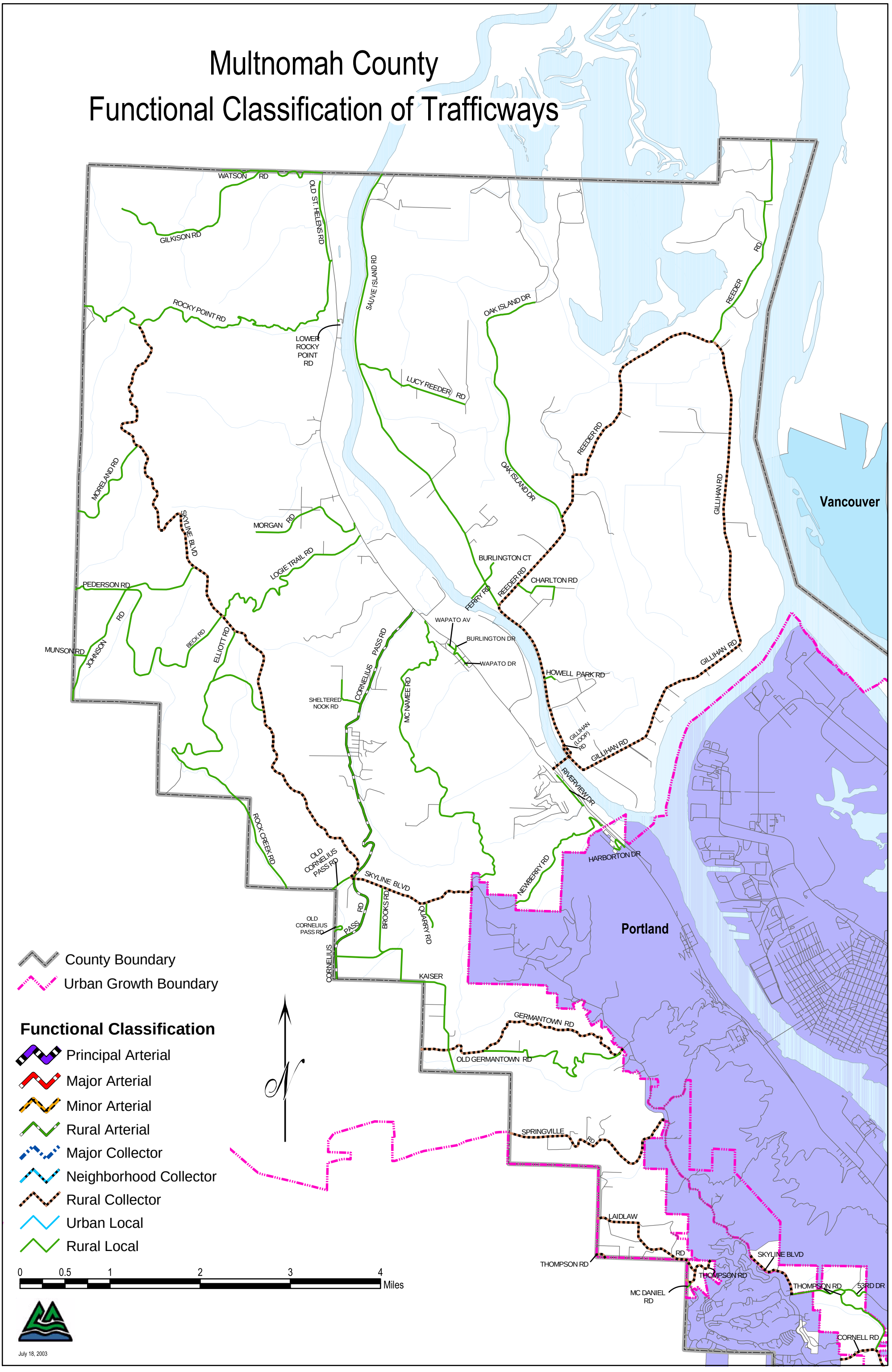
The roadways and designations are shown on Figure 1, Multnomah County Functional Classification of Trafficways maps (separated into five districts). The tables in Appendix B list roadway segments in Multnomah County with the functional classification designations in each jurisdiction.

The tables in Appendix B include roadways classified as the highest level (i.e., "expressway") to those classified as minor collectors ("neighborhood;" "community"), but do not generally include local streets. While Multnomah County has jurisdiction over local roadways, these facilities are

Multnomah County
Functional Classification of Trafficways (PROPOSED)



Multnomah County
Functional Classification of Trafficways



Multnomah County
Functional Classification of Trafficways
(PROPOSED)

County Boundary

Urban Growth Boundary

Functional Classification

- Principal Arterial
- Major Arterial
- Minor Arterial
- Rural Arterial
- Major Collector
- Neighborhood Collector
- Rural Collector
- Urban Local
- Rural Local

0 0.5 1 2 Miles

August 12, 2003

Multnomah County
Functional Classification of Trafficways

County Boundary
Urban Growth Boundary

Functional Classification
- Principal Arterial
- Major Arterial
- Minor Arterial
- Rural Arterial
- Major Collector
- Neighborhood Collector
- Rural Collector
- Urban Local
- Rural Local

0 0.5 1 2 Miles

July 18, 2003

Multnomah County
Functional Classification of Trafficways (PROPOSED)

- County Boundary
- Urban Growth Boundary

Functional Classification

- Principal Arterial
- Major Arterial
- Minor Arterial
- Rural Arterial
- Major Collector
- Neighborhood Collector
- Rural Collector
- Urban Local
- Rural Local

N

0 0.5 1 2 Miles

August 12, 2003

Multnomah County
Functional Classification of Trafficways

County Boundary

Urban Growth Boundary

Functional Classification

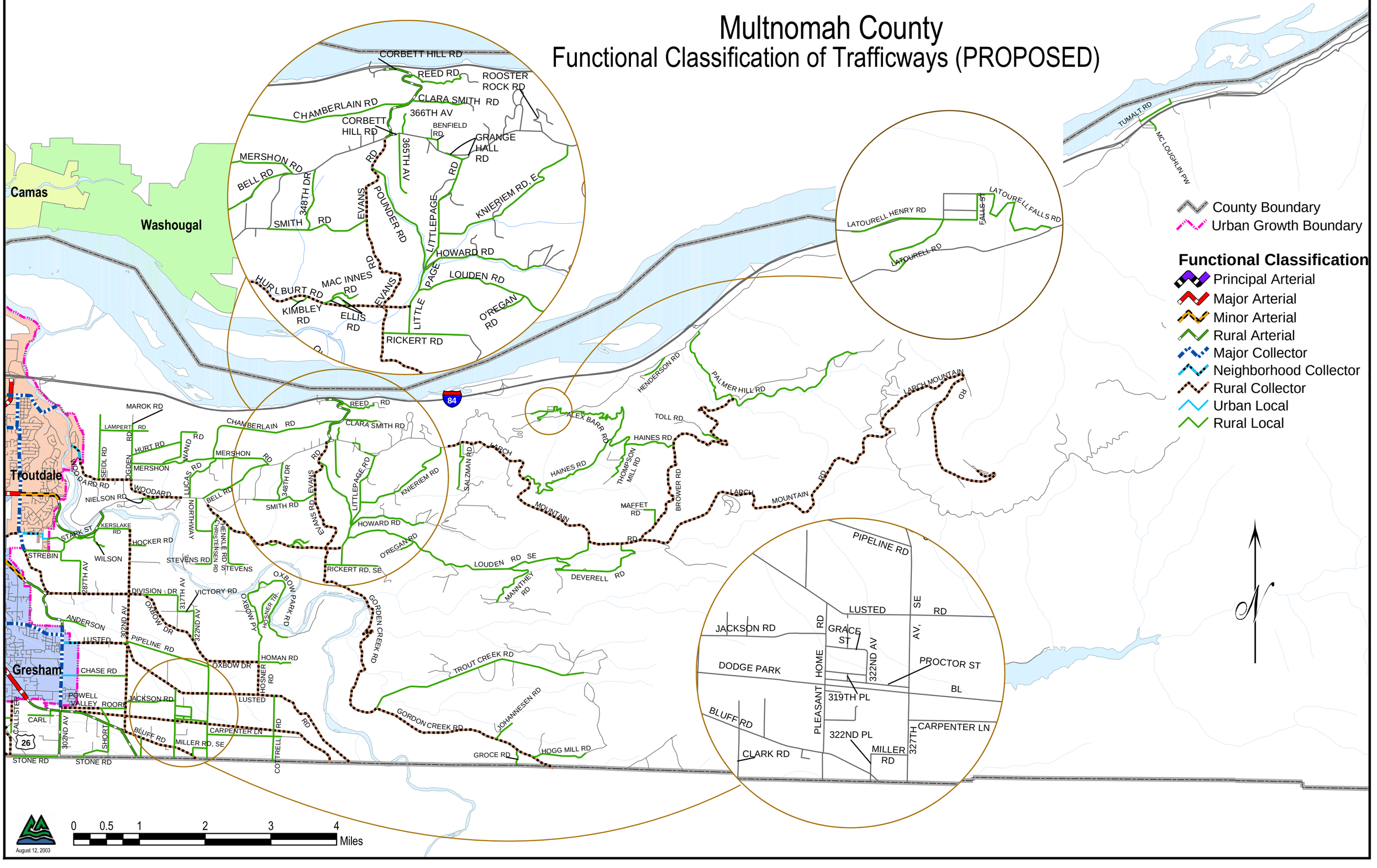
- Principal Arterial
- Major Arterial
- Minor Arterial
- Rural Arterial
- Major Collector
- Neighborhood Collector
- Rural Collector
- Urban Local
- Rural Local

N

0 0.5 1 2 Miles

July 18, 2003

Multnomah County
Functional Classification of Trafficways (PROPOSED)



Multnomah County
Functional Classification of Trafficways

Camas
Washougal
Troutdale
Gresham

CORBETT HILL RD
REED RD
ROOSTER ROCK RD
CLARA SMITH RD
CHAMBERLAIN RD
366TH AV
CORBETT HILL RD
BENFIELD RD
GRANGE HALL RD
MERSHON RD
BELL RD
348TH DR
365TH AV
EVANS RD
POUNDER RD
LITTLEPAGE RD
KNIERIEM RD, E
SMITH RD
HOWARD RD
MAC INNES RD
HURLBURT RD
KIMBLEY RD
ELLIS RD
LITTLE PAGE RD
LOUDEN RD
O'REGAN RD
RICKERT RD

LATOURELL HENRY RD
FALLS ST
LATOURELL FALLS RD
LATOURELL RD

TUMALT RD
MC LOUGHLIN PW

HENDERSON RD
PALMER HILL RD
LARCH MOUNTAIN RD
ALEX BARR RD
TOLL RD
HAINES RD
SALZMAN RD
LARCH MOUNTAIN RD
THOMPSON MILL RD
BROWER RD
MAFFET RD
LOUDEN RD SE
DEVERELL RD
MANNTHEY RD

MAROK RD
LAMPERT RD
SEIDL RD
OGDEN RD
HURT RD
WAND RD
MERSHON RD
LUCAS RD
WOODARD RD
NIELSON RD
NORTHWAY
BELL RD
CHRISTENSEN RD
HENKLE RD
SMITH RD
EVANS RD
348TH DR
LITTLEPAGE RD
KNIERIEM RD
HOWARD RD
O'REGAN RD
RICKERT RD, SE
STARK ST
KERSLAKE RD
HOCKER RD
STEVENS RD
STEVENS
STREBIN
WILSON
287TH AV
DIVISION DR
317TH AV
VICTORY RD
OXBOW PARK RD
OXBOW PY
HOSNER TR
OXBOW DR
302ND AV
322ND AV
ANDERSON
LUSTED
PIPELINE RD
HOMAN RD
HOSNER RD
CHASE RD
POWELL VALLEY ROOR
JACKSON RD
LUSTED
CALLISTER
CARL
SHORT
BLUFF RD
MILLER RD, SE
CARPENTER LN
CORTRELL RD
GORDON CREEK RD
TROUT CREEK RD
JOHANNESEN RD
GROCE RD
HOGG MILL RD
STONE RD
STONE RD
26
84

PIPELINE RD
LUSTED RD SE
JACKSON RD
GRACE ST
322ND AV
PROCTOR ST
DODGE PARK
319TH PL
BLUFF RD
PLEASANT HOME RD
322ND PL
CARPENTER LN
327TH AV
CLARK RD
MILLER RD

County Boundary
Urban Growth Boundary

Functional Classification
- Principal Arterial
- Major Arterial
- Minor Arterial
- Rural Arterial
- Major Collector
- Neighborhood Collector
- Rural Collector
- Urban Local
- Rural Local

N

0 0.5 1 2 3 4 Miles

July 18, 2003

generally located in rural portions of the County, where no other jurisdiction applies a classification. One exception is Clatsop Street/Cheldelin Road, which the Pleasant Valley Concept Plan classifies as minor arterial. The other exception is Bluff Road, which needs to be reclassified from local street to rural collector.

The first table shows east Multnomah County; the second table shows west Multnomah County. The roadways are broken down into segments, as necessary, in order to capture all the classification changes through the jurisdictions. Where roadways have multiple names or numbers, all those given for that segment are given, separated by slashes (/). Roadways are for existing alignments, unless listed as "proposed." All segments in the west side table are outside City of Portland limits. All classifications are urban unless preceded by "rural" (i.e., "minor arterial" refers to an urban road while "rural arterial" refers to a rural road). ODOT classifications are not shown because ODOT's classifications are not directly comparable with the classifications of Multnomah County and the other jurisdictions (see Appendix F).

The County does not designate regional boulevard, community boulevard, regional street, or community street overlays. The County relies on the RTP and local TSPs and other planning documents to identify roadways with these overlay designations. The County does, however, designate scenic routes.

The County does not have any design standards for scenic route, but unique design standards may be imposed on scenic routes to preserve and enhance the scenic character of the facility on a case-by-case basis. The following are identified as scenic routes:

- Skyline Boulevard (Rocky Point Road to NW McNamee Road)
- Skyline Boulevard (Cornell Road to Barnes Road/Burnside Road)
- NW Skyline Boulevard (NW Springville Road to New Germantown Road)
- NW Thompson Road (NW Skyline Boulevard to NW Cornell Road)
- N Marine Drive (NE 185th Ave to NE 223rd Avenue)
- Historic Columbia River Highway (I-84 [NE 244th Avenue] to Bonneville Area)

3.1 Comparison Among Jurisdictions

Discrepancies between Multnomah County classification of a roadway and another jurisdiction are highlighted in the tables in Appendix B and summarized as follows: Yellow indicates a recommended amendment to the classification, with the recommendation in italics; Blue indicates a discrepancy, but where no amendment is recommended; Green indicates a classification that does not match the County's preferred street standards, but does fall within the County's range of acceptable standards; and Pink indicates segments in the Pleasant Valley and Powell-Foster areas whose County classifications will change when the plans are implemented, and whose classifications will be included/updated in the 2003 RTP update.

3.1.1 Pleasant Valley and Other Future Planning Areas

The Multnomah County Board of Commissioners has accepted the Pleasant Valley Concept Plan. The County will retain the current rural classifications for the roadways in the plan area (see Figure 2). With the acceptance of the Pleasant Valley Concept Plan, the Board of Commissioners resolved to retain ownership of regional roads. Upon implementation, when the parcels are annexed by the City of Gresham, the County will transfer non-regional roads to the City on amending the IGA. The County will treat roadways in future planning areas such as the Springwater Corridor and Damascus-

Boring area in the same manner: the County will update or develop an IGA upon annexation to transfer appropriate roadways. Until future planning areas are annexed, the County shall retain current classifications.

The development of the Pleasant Valley area will impact the roadway system in other ways as well. For example, a recommended implementation proposal from the Powell Boulevard/Foster Road Corridor Transportation Plan – Phase I is a new two- or three-lane connector extending 174th Avenue between Jenne Road and Giese Road. Upon construction of this connector, Jenne Road would be reclassified as a local road between Foster Road and the 174th Avenue extension.

3.1.2 Metro

There are discrepancies between the County and Metro on some of the road segments. However, it is not recommended that the County amend any of these classifications. Although Metro's classifications closely match those of the County's in title and in the description of connectivity (see Section 2.0 and Appendix A for a discussion of functional classification definitions and descriptions), Metro uses Regional Street Design Classifications for street standards (see Section 4.0 and Appendix C), and not the Regional Motor Vehicle Functional Classifications used in appendices A and B. Therefore any discrepancies that would affect street design are covered in the discussion of street standards (Section 4.0 and Appendix C).

Several of the arterial and collector-level roadways classified by Multnomah County are not shown in the RTP (for example, the Wood Village Boulevard extension). Multnomah County should work with Metro to add these to the RTP during the next update.

There are two segments shown in the RTP as Collector of Regional Significance that should be minor arterial: Sandy Boulevard from 207th Avenue to end, and Stark Street east of Troutdale Road. Stark Street from Kane Road to 257th Avenue, and from 257th Avenue to Troutdale Road should be a major arterial—Metro currently shows these two segments as Collector of Regional Significance. Finally, 181st Avenue from the north boundary to I-84 should be a major arterial; not a minor arterial.

3.1.3 Other

Some changes in classification are also recommended to address discrepancies between Multnomah County and other jurisdictions. Burnside Street between 162nd Avenue and 181st Avenue is classified as major collector by Multnomah County and as major arterial by Metro. It is recommended that the City of Gresham evaluate its community designation for this segment. There are three segments that it is recommended the City of Wood Village change from neighborhood collector to major collector:

- Wood Village Boulevard from Arata Road to Glisan Street
- Arata Road
- 244th Avenue from Sandy Boulevard to Halsey Street

Likewise, the City of Troutdale should consider changing 242nd Avenue from major arterial to principal arterial. There are no recommended changes for the City of Fairview.

The West of Sandy Rural Area Plan recommends that Bluff Road be reclassified from local street to rural collector. Bluff Road serves as on of the two main connections between the Pleasant Home rural community and the City of Sandy (Dodge Park Boulevard is the other connection).

Approximately half the traffic on Orient Dr east of Dodge Park Boulevard is to or from Bluff Road. The reclassification would recognize the roadway's function as a farm-to-market route.

No changes are recommended to west side (Portland) roadways (second table in Appendix B). In terms of classifications, Portland's Regional Trafficway corresponds to the County's Freeway and Expressway. Portland's Major City Traffic Street corresponds to the County's arterial designations. District Collector for Portland is the equivalent of Major Collector for Multnomah County. The County is participating with the City of Portland in the development of a TSP for urban unincorporated areas, pending the award of a TGM grant.

3.2 Recommended Amendments to Multnomah County Functional Classification of Trafficways Map and Database

Multnomah County should amend the functional classification of the roadways as shown in Appendix B. As described in the introduction, recommendations for changes to the adopted Multnomah County Functional Classifications of Trafficways map (Figure 1) will be made.

In addition, there are several errors on the map that need to be corrected as part of the amendment process. These errors are only in the mapping system. Therefore, only the correct functional classification shows in Appendix B. The corrections are listed in the "Summary of Recommended Amendments" on page i of this report.

4.0 Street Standards

The table in Appendix C works in conjunction with the tables in appendices A and B and contains the roadway design standards for each jurisdiction. The table does not include standards for local streets. No column for the City of Troutdale is included, as all arterials and collectors within the city limits are county roads. Troutdale only provides standards for local streets, which are not included in the table in Appendix C. For both Multnomah County and Metro, the preferred standard is shown first, with the acceptable range immediately following in parentheses. Metro has ideal, predominant, functional, and absolute minimum width standards. The Appendix C table uses the predominant width for the preferred standard.

4.1 Comparison among Jurisdictions

An analysis of jurisdictional street standards resulted in the identification of two potential types of differences from the Multnomah County standards. The first type is when a jurisdiction's standards differ from the preferred standards but are within the acceptable range provided by the County. (These differences are shown highlighted in green in the Appendix C table.) The second type of difference is when jurisdictional standards or portions of standards fall outside of Multnomah County's acceptable range. (These differences are shown highlighted in blue in the table.)

Where other jurisdictions' standards differ from Multnomah County's preferred standards but still fall within the County's acceptable range, no change needs to be made to the County standards. The values that do not fall within the range of acceptable County standards indicate a need to re-evaluate the County's preferred values and acceptable ranges. In particular, the County should strive to meet Metro's absolute minimum width.

The County's principal and major arterial classifications have similar design standards, but are different in terms of connectivity and access. Likewise, although the County's minor arterial and

major collector standards are very similar, there is a key functional difference in terms of allowed number of access points. Arterials have limited access, while collectors may have more driveways (see Appendix A).

4.2 Recommended Amendments to Multnomah County Design Standards, Part I—Design Manual

The County should amend their design standards to provide the following:

- Principal Arterial—allow two turn lanes as needed at intersections
- Major Arterial—Increase planter strip width to 7 feet to comply with Metro's standard
- Add the Regional Street Overlay standards
- Add the Community Street Overlay standards
- Adequate right-of-way at intersections to ensure compliance with the Americans with Disabilities Act

On rural arterials, AASHTO, Metro, and Portland require a median/turn lane, which the County does not require. However, at this time the County will not require the addition of a median/turn lane on its rural roadways. Therefore no amendment to the county standards is recommended.

The County and Metro's median/turn lane widths differ for principal arterials, major arterials, and minor arterials. For Metro's regional boulevards (major arterial) and community boulevard (minor arterial, major collector) the standard is a 10-foot-wide lane. For principal arterial it is 16 feet. For maintenance and safety reasons, it is not recommended that the County reduce its 12-foot minimum standard for medians/turn lanes.

The County needs to amend the Multnomah County Design Standards to adopt Metro's Regional Street, Community Street, and Green Street overlays. The definitions of Regional and Community Street overlays are included in Policy 34, but the design manual does not include standards for them. The Green Street and Industrial Street overlays currently are not included in Policy 34, but language to add the two overlays is shown in Appendix E.

5.0 Compliance with the Transportation Planning Rule

This section has two purposes: (1) to identify areas where Policy 34 does not comply with Oregon Administrative Rules (OAR) 660-012-0000 through 660-012-0070, Department of Land Conservation and Development (DLCD), Division 12, Transportation Planning ("Transportation Planning Rule [TPR]") and (2) to recommend amendments to Policy 34 to ensure compliance with the TPR.

The TPR implements Oregon Statewide Planning Goal 12: Transportation, which is "to provide and encourage a safe, convenient and economic transportation system." Since the goals and guidelines of Goal 12 provisions are incorporated into the TPR, the Goal is not addressed directly in this memorandum. Both Goal 12 and the TPR define the required elements of TSPs and transportation planning procedures. The TPR establishes the contents of TSPs prepared by regional and local governments, and the process to select transportation projects developed by regional and local governments. The two TPR sections relevant to ensuring Policy 34 compliance are 660-012-0045, Implementation of the TSP and 660-012-0060, Plan and Land Use Regulation Amendments.

5.1 Comparison to the Transportation Planning Rule

In general, Policy 34 addresses the main principles of the TPR, including access control and coordination with other governments. However, Policy 34 lacks language ensuring adequate accommodation of bicycle and transit facilities. One recommendation to address this deficiency is to integrate Policy 36: Transportation System Development Requirements with Policy 34. Policy 36 deals with elements of the TPR that are included but inadequate in Policy 34, such as access management, bicycle and transit facilities, pedestrian connectivity, and parking. Many recommended amendments to Policy 34 include language that references Policy 36 and other applicable Comprehensive Framework Plan policies, so that Policy 34 will be consistent with the other policies, even if other policies are amended in the future.

The table in Appendix D summarizes the relevant TPR subsections and the section of Policy 34 that addresses each issue. The "Comments" column describes elements that Policy 34 is missing. Recommended changes to Policy 34 language are shown in ~~strikethrough~~ (language to be deleted) and <u>double underline</u> (language to be added) in the "Recommended Amendments" column.

The Appendix D table is formatted to ensure that all relevant sections of the TPR are included in Policy 34. A basic assumption is that Policy 34 can comply with the TPR even though Policy 34 includes additional policies and strategies that are not mentioned in the TPR, and vice-versa. For example, 660-012-0045(2)(c) of the TPR is not included because it addresses protection of airports, but Policy 34 deals only with trafficways. Other TPR subsections are omitted from the table because they are covered in other Multnomah County Comprehensive Framework Plan policies, particularly the Physical Support Systems Plan policies. However, some TPR requirements should be included in Policy 34 by reference, even if they are covered in other policies (for example, provisions for bicycles).

6.0 Issues for Future Discussion

The EMCTC should establish an approach to resolve the following system-wide and segment/intersection-specific issues. Multnomah County should undertake an East Multnomah County Circulation Study that would follow the approach established by EMCTC and would identify solutions. The study should include recommendations for staging improvements and recommendations for coordinating improvements among the affected jurisdictions, and identification of potential funding sources.

6.1 System-Wide Issues

Multnomah County should take the following actions in order to ensure that planning and improvements are coordinated with Metro and the local jurisdictions.

- Once the Transportation Growth Management (TGM) grant is secured, coordinate with the City of Portland on preparation of the urban unincorporated areas TSP.
- Evaluate application of Metro regional overlays.
- Review the cities' parking standards for consistency with County's and Metro's parking design standards, particularly where on-street parking is acceptable and not acceptable. Metro guidelines allow on-street parking on Regional Boulevards, Community Boulevards and Community Streets. No parking is allowed on freeways, highways, Regional Streets, or Urban or Local roads. Green Street treatments may apply to any of these trafficways.

- The Intergovernmental Agreements (IGAs) between the County and local jurisdictions should be reviewed and potentially amended to include language protecting transportation facilities when local plans and regulations are amended, as per the TPR (660-012-0060).
- Create an IGA between the City of Wood Village. There is a Memorandum of Understanding between Multnomah County and Wood Village in effect.
- Work with cities on identifying potential areas to amend their TSPs for greater coordination among the jurisdictions in terms of functional classifications and design standards.
- Any changes recommended to the Multnomah County Comprehensive Framework Plan or Multnomah County Functional Classification of Trafficways map need to comply with the RTP. The RTP is scheduled to be updated in October 2003, after this project is completed. Amendments to the County Framework Plan and map should be evaluated for compliance with the updated RTP once it is released. For example, some of the arterial and collector-level roadways listed in Appendix B are not shown in the RTP (i.e., the Wood Village Boulevard extension). Multnomah County should work with Metro to add these to the RTP during the upcoming update, as discussed in Section 3.1.2.
- The County should continue to work through the inter-agency Intelligent Transportation Systems Subcommittee on Public Safety. The subcommittee coordinates homeland security, emergency evacuation routes, hazardous material routes, and emergency communications. The subcommittee is developing a map of emergency routes.

6.2 Truck Routes

Issue. Multnomah County does not have any designated truck routes. The County allows trucks on arterials, with restrictions on particular segments that have insufficient geometric characteristics, such as turning radii. The County and cities cannot restrict trucks on National Highway System (NHS) routes. NHS routes east of Portland are:

- I-84/US 30 east to 188th Drive
- I-84 from the Union Pacific railroad crossing at NW Dunbar Road to the east County boundary
- NE 181st Avenue between I-84 and SE Burnside Street
- SE Burnside Street (NW Burnside Road, NE Burnside Road) from NE 181st Avenue to E Powell Boulevard
- US 26 (Mount Hood Highway) from the E Powell Boulevard/SE Powell Valley Road/NE Burnside Road intersection to the south County boundary
- OR 212 between I-205 and US 26

Designated truck routes are shown in the 1999 Oregon Highway Plan. The routes within the project area are the interstate highways (I-5, I-84, I-205, I-405).

The City of Gresham and Multnomah County support moving the freight route from 181st/Burnside because there are land use conflicts with truck passage and substandard roadway conditions along Burnside in the Rockwood area. If the 242nd Avenue Connector is constructed, it would serve as the truck route as identified in the RTP. As either an interim or permanent alternative, EMCTC needs to discuss alternatives for consideration, including designating 207th Avenue and 257th Avenue as the NHS route. The region is undertaking a Regional Freight Study that should provide direction concerning regional freight movements through East Multnomah County.

The Wood Village city council does not support a truck route west of 242nd on Glisan Street (westbound). Glisan is the boundary between Wood Village (north) and Gresham (south). However, since Glisan is classified as a major arterial, and County policy permits trucks on arterials (except as listed in Table 1), Glisan will continue as a freight route.

Because of its classification, level of improvement, connections to I-84 and NW Graham Road, and quick access to NW Graham Road, SW 257th Avenue has become very attractive for truck traffic. However, the City of Troutdale may oppose a truck route designation, and the existing I-84 half diamond interchange may not be able to fully accommodate future truck traffic (see Section 6.3.2).

Many of the County's current restrictions on roadways can be removed, because improvements have been made. An April 16, 1981 resolution authorized truck/tractors and semi-trailer combinations up to 65 feet long and other combinations up to 75 feet long to operate on County arterials without a permit except on ten identified segments. A November 15, 1990 resolution restricts maximum length to 40 feet four additional segments (see Table 6). The remainder of the restricted segments are listed in the County database. There are three discrepancies between the resolutions and the County database (shown highlighted).

Table 1: Current Truck Restrictions

Roadway	Segment	Restriction
SE 136th Ave[1]	Division to Foster	Prohibited
SE 148th Ave[1]	Powell to 136th	Prohibited
SE 190th Ave[1]	19th St (Gresham) to Butler	Prohibited
NE 202nd Ave	Stark to Halsey	Through trucks prohibited
SE 202nd Ave	Division to Powell Blvd	Through trucks prohibited
NE 238th Dr[1]	Halsey to Glisan	Limit 40 feet
	I-84 to Glisan[2]	Limit 40 feet
NE & SE 242nd Ave[1]	Powell to County line	Limit 50 feet
	Glisan to Stark[2]	Limit 40 feet maximum; not designated NHS route
SE 257th Dr[1]	I-84 to Stark	Prohibited
	Division to Orient	Limit 50 feet
NE Blue Lake Rd	223rd to Marine	Through trucks prohibited
NE Buxton St[2]	Columbia River Hwy to NE Cherry Park Rd	Limit 40 feet
NE Cherry Park Rd[1]	242nd [SW Sturges Ln] to 257th	Limit 50 feet
NW Cornell Rd	Skyline to Portland city limits	Prohibited except local deliveries
SE Foster Rd[1]	122nd to 257th [SE Cheldelin to 300' E/SE Jenne Rd]	Prohibited
NW Greenleaf Rd	Skyline to Cornell	Through trucks prohibited
SE Holgate St[1]	122nd to 136th	Prohibited
NW McNamee Rd	Skyline to Hwy 30	Through trucks prohibited
NW Newberry Rd	Skyline to Hwy 30	Through trucks prohibited
NW Thompson Rd	Skyline to Cornell	Prohibited except local deliveries
Towle Rd[1]	Johnson Creek to Heiney	Prohibited
NE & SE Troutdale Rd[2]	Cherry Park to Stark [Division]	Limit 40 feet

[1]1981 Resolution
[2]1990 Resolution

The County would like to continue to allow trucks on arterials. The County Commissioners should resolve to lift the restrictions on all segments because of improvements made since the original restricting resolution. One exception is 238th/242nd Avenue between Glisan and Halsey streets, which should remain restricted because of steep grade, narrow right-of-way and tight turns.

In addition, there are 11 bridge weight restrictions. All are limited to vehicles of 80,000 pound gross weight or less, except the Sellwood Bridge, Stark Street viaduct, and Corbett Hill viaduct where additional restrictions exist. No changes are recommended to the bridge restrictions.

- Sauvie Island Bridge
- Burnside Bridge
- Morrison Bridge east side approach ramps
- Hawthorne Bridge east side approach ramps
- Sellwood Bridge
- Palmblad Bridge (Johnson Creek)
- Beaver Creek Bridge
- Stark Street viaduct (Sandy River)
- Stark Street Bridge (Sandy River)
- Corbett Hill viaduct
- Gordon Creek Bridge
- Gordon Creek viaduct

Future Discussion: The upcoming freight study will address truck routes in the east Multnomah County area. However, EMCTC should make identifying truck routes a priority, because the RTP update which begins in October 2003 will include changes to freight corridor designations as one of three policy issues to be addressed (the other two are boulevard definitions and Special Transportation Areas). In particular, Multnomah County will work through EMCTC to facilitate discussion of truck movements through East Multnomah County. The ultimate goal of this discussion is to identify the NHS route through East Multnomah County.

Multnomah County, in conjunction with Metro and the City of Portland, should consider a future I-84 westbound interchange at 122nd Avenue, or another location west of 162nd Avenue. Truck traffic is heavy westbound on Marine Drive, and westbound interchange access on I-84 could alleviate some of the traffic.

6.3 Problematic Roadway Segments/Intersections

The following roadway segments and/or intersections have been identified by the TAC as having issues related to functional classification. Resolution is beyond the scope of this project, but the issues and potential future actions are discussed below.

6.3.1 Birdsdale/NE 202nd Avenue

Issue. Gresham completed a study to re-align Birdsdale off 202nd Avenue in 1994. An alternative was investigated because the existing truck route (NE 181st Avenue) will not be able to support the future truck traffic. Although the study is outdated and current conditions need to be revisited, the study found that NE 181st Avenue's current five-lane facility would need two additional travel lanes, which is untenable. In the 1995 roads transfer between the County and cities, the County retained jurisdiction of Birdsdale. Multnomah County classifies Birdsdale as a major collector (preferred

standard is 80 feet of right-of-way, including 50 feet of paved width, two to three 12-foot travel lanes, two 6-foot bike lanes, two 6-foot planter strips, and two 6-foot sidewalks). Currently, Birdsdale is a two-lane facility with right-of-way ranging from 40 to 50 feet. Metro classifies it as a collector of regional significance. Gresham classifies it as a collector. There are four logistical and financial obstacles to accommodating trucks on Birdsdale: there are major power lines and a concentration of residences adjacent to the right-of-way, a substandard railroad crossing, and massive Douglas-fir trees within the right-of-way, which the community wishes to protect. The railroad line runs on the south side and parallel to I-84 and crosses just north of NE Thompson Road. In addition, there is no readily available opportunity (i.e., a major land development) at this time to construct a new route.

Future Discussion. Multnomah County should undertake a re-alignment study of 202nd, to identify potential short- and long-term solutions for truck movement through the area, including requiring appropriate right-of-way dedication from land development projects. Currently, trucks are prohibited between Stark and Glisan streets and will not be allowed on this section.

6.3.2 SW 257th Avenue/Kane Road

Issue. Multnomah County classifies 257th as a major arterial. It is designed to major arterial standards and functions as a major arterial between I-84 and Division Street. However, the segment between Division and Powell Valley Road needs to be improved to major arterial standards. Because of its classification, level of improvement, and connections to I-84 and NW Graham Road, SW 257th Avenue may become a defacto truck route in the future. SW 257th Avenue has become very attractive for truck traffic because it provides quick access to NW Graham Road, an industrial park. It may be designated a truck route in the RTP. However, the City of Troutdale may oppose the designation, and the existing I-84 half diamond interchange may not be able to fully accommodate future truck traffic.

Future Discussion. Examine possibility of constructing a full diamond interchange at I-84/SW 257th Avenue or explore other options and redirect truck traffic. One potential option to be evaluated is construction of a southbound connection to Halsey Street from the split-diamond interchange. The regional freight study may determine that the truck traffic on 257th is more local rather than regional in origin.

6.3.3 NE Burnside Road/US 26/SE 242nd Avenue/SE Hogan Road

Issue. The main issues with these two intersections are accommodating both future boulevard design implementation and truck use, and reducing the number of accesses. Boulevard design standards provide a safe facility for moderate/heavy volumes of traffic at moderate/high speeds. This design standard is very difficult to achieve due to the numerous access points along US 26 as well as its major truck route use through these intersections. Currently, there are many accessways onto the roadways, more than prescribed by Multnomah County functional classification (Hogan would become a major arterial if the 242nd Avenue connector is built; Burnside is a principal arterial).

Future Discussion. Multnomah County can work with the City of Gresham on establishing a plan to decide whether the freight route or boulevard designation is more appropriate, and to reduce the number of accesses, as parcels redevelop.

6.3.4 242nd Avenue Connector/NE 238th Drive

Issue. The condominium residents along NE 238th Drive (south of Arata Road) have requested that the roadway be blocked and reclassified as a local street. The roadway currently is classified as a minor arterial and has an ADT of 25,000.

The 242nd Avenue Connector project has been suspended because the transportation analysis completed for the Environmental Assessment found low demand for the connector in the short-term. In mid to late 1990s, the Troutdale City Council was a major proponent of the project. However, the current Troutdale City Council is not likely to support the project, although it has not passed a resolution in opposition. The Wood Village City Council passed a resolution to not support the project.

In addition, the County classifies 238th south of I-84 as a minor arterial. The City of Wood Village is concerned about traffic safety due to the current configuration of this segment of 238th. It is also concerned about bicycle safety. The existing roadway curves do not meet AASHTO urban design standards and two six-foot bike lanes are required.

The City of Gresham classifies 242nd north of Burnside as a principal arterial. The street standard is for 120 feet of right-of-way. The City of Wood Village's concerns about the potential negative traffic and noise impacts on the community are outlined in a December 17, 2001 memorandum. The City of Wood Village is concerned about traffic densities and impacts increasing on an already hazardous NE 238th Drive north of Glisan, and the functional classification differences between Gresham and Wood Village.

Future Discussion. Although the County would not construct a barrier to access to NE 238th Drive, alternatives should be evaluated, such as the impacts of a future 242nd Avenue connector. The connector would redirect traffic from NE 238th Drive. The Springwater Corridor study, the freight study, and Gresham's north-south study will address the regional impacts of the proposed connector and potential alternatives.

6.3.5 238th Drive Extension to Marine Drive

Issue. The City of Troutdale evaluated development options for the former Reynolds Aluminum manufacturing site north and west of Graham Road (DKS Associates, Inc., 2002). The report was completed as part of an economic development study. The manufacturing site currently is classified as a superfund site. Although the property is for sale, the owners are not marketing it aggressively. Connections to the site are limited, as the site is bounded by the Columbia River on the north and the Sandy River on the east. The main access is from the I-84/Frontage Road (Marine Drive) interchange. ODOT recently made improvements to the 238th Drive/I-84 interchange that increased its capacity. The major obstacles to the 238th Drive extension identified by DKS Associates, Inc., are acquisition of private property, construction of a new railroad undercrossing, and impacts to environmentally sensitive lands. Marine Drive currently is classified as a major collector. As discussed previously, the County standards for base and asphalt on major collectors are adequate for truck traffic.

Future Discussion. Evaluate necessity of constructing 238th Drive extension if development does not occur on the Reynolds Aluminum site. Other options to the 238th Drive extension could include extending 242nd Avenue to Marine Drive. A north-south connection to Marine Drive should be

included in the RTP and Troutdale TSP updates. Troutdale has applied for a TGM grant from ODOT to prepare its TSP update.

6.3.6 NE Halsey Street between NW Fairview Avenue and the Historic Columbia River Highway (HCRH)

Issue. The major issue to be addressed is whether Halsey should serve local or through traffic. Wood Village has adopted Halsey Street design standards, which are pedestrian friendly and have raised landscaped medians. The City of Wood Village would like the County to consider the installation of roundabouts at the future Wood Village Boulevard intersection and the existing NE 244th Avenue intersection as traffic calming measures. Within its city limits, the City of Wood Village would like to construct two parking lanes, where feasible. In addition, Fairview has Halsey Street identified with boulevard type treatments (although does not have a boulevard overlay). On the other hand, Halsey Street currently connects three town centers, the McMenamins Edgefield in Troutdale, and the Greyhound Park. This creates a conflict with the County's Capital Improvements Project (CIP) list, which identifies Halsey Street as a major arterial to provide a better connection to Fairview Village.

Future Discussion. If Halsey Street is downgraded to a local street, will parallel routes have adequate capacity to serve the additional traffic? If it is determined that Halsey should have a boulevard overlay, the boulevard designation should be incorporated into the RTP update. The County has applied for a TGM grant to do a design charrette on Halsey Street. If constructed, the 242nd Avenue connector would provide access from south and north to NE Halsey Street on the east boundary of Wood Village, and would allow NE 238th Drive to provide only local access. Once a decision has been reached for the treatment of Halsey Street, it should be included in the RTP, the County's CIP, the Wood Village TSP, and the Fairview TSP.

6.3.7 Pleasant Valley

Issue. The access roads into the area on the north and west (SE Foster Road, SE 162nd Avenue, SE 190th Drive, SE 174th Avenue, SE McKinley Road) are already congested. The existing congestion, combined with the policy of following Metro's green streets guidelines, mean that the design for the area roadways is constrained. Constructing the roadways to Multnomah County standards for number and width of vehicle travel lanes may not be possible.

Future Discussion. The Pleasant Valley concept plan has been accepted by all jurisdictions. The Powell-Foster study will address gateway road possibilities. Multnomah County, the City of Gresham, the City of Portland, and Metro may jointly evaluate alternatives to ease congestion on access roads on the outskirts of Pleasant Valley and establish standards that will meet area transportation needs, Metro design guidelines, and County standards.

7.0 References

7.1 Documents

American Association of State Highway and Transportation Officials (AASHTO). 2001. "A Policy on Geometric Design of Highways and Streets." Fourth Edition.

Bernstein, Robert, P.E., J.K. McFarland Transportation Planning Services, and David Kline & Associates. 1995 (June). "Multnomah County Urban Roads Functional Classification Study: Technical Study Report."

DKS Associates, Inc. 2002 (February). "Transportation Concept System Planning Study: Troutdale Science and Technology Park."

_____. 2001 (September). "City of Wood Village Transportation System Plan Roadway Element Final Report."

_____. 2000 (August 8; "June 1999" on cover). "Fairview Transportation System Plan."

_____. 1995 (December 12). "Troutdale Transportation System Plan."

Gresham, City of, Transportation Planning. 2002. "Transportation System Plan."

Metro. 2002a (June). "Creating Livable Streets: Street Design Guidelines for 2040." Second edition.

_____. 200b (June). "Green Streets: Innovative Solutions for Stormwater and Stream Crossings." First edition.

_____. 2000b (August 10). "2000 Regional Transportation Plan."

Multnomah County. No date. Multnomah County Design Standards. Part I – Design Manual.

Multnomah County, Board of County Commissioners. 1990 (November 15). Order No. 90-191.

_____. 1981 (April 16). Resolution.

Oregon Department of Transportation. 2002. "Metric Highway Design Manual."

_____, Transportation Development Division, Planning Section. 1999 (March 18). "1999 Oregon Highway Plan: An Element of the Oregon Transportation Plan."

Pleasant Valley Project Partners. 2002 (July). "Pleasant Valley Concept Plan: Implementation Strategies."

Portland, City of, Office of Transportation. 2002 (Adopted October 30; Effective December 14). "Transportation System Plan: Volume 1 Policies and System Improvements."

7.2 Personal Communications

Anderson, John, Community Development Director, City of Fairview. 2003 (September 24). Telephone interview.

Galloway, Jim, Director of Public Works, City of Troutdale. 2003 (March 25). Telephone interview.

Malone, Carl, Public Works Director, City of Wood Village. 2003 (March 25). Telephone interview.

7.3 Agency Meetings

During the project, the consultant team met with the following state, regional, and local agencies:

Oregon Department of Transportation, Ross Kevlin, TGM Planner. May 13, 2003.

Metro, Ted Leybold, Principal Transportation Planner. May 13, 2003.

Portland Office of Transportation, John Gillam, Transportation Planner Supervisor. May 13, 2003.

City of Fairview, Bob Cochran, Public Works Director. May 16, 2003.

City of Gresham, Jon Dorst, Director of Transportation and Development Services; Ron Papsdorf, Principal Planner; Rebecca Ocken, Senior Planner; Jay McCoy, Civil Engineer II. May 16, 2003.

City of Troutdale, Jim Galloway, Director of Public Works. May 16, 2003.

City of Wood Village, Carl Malone, Public Works Director, and Clayton Morgan, Assistant to the City Administrator. May 16, 2003.

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APPENDICES

Appendix A
Functional Classifications Comparison Table

Functional Classifications Comparison—Summary

Classification	Multnomah County and Wood Village	AASHTO	METRO[1]	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Freeways/Expressways	Freeway	Urban Principal Arterial—Interstate[2]	Principal Arterial	Freeway		Principal Arterial	Arterial Highway	Regional Trafficway
	Expressway	Urban Principal Arterial—Other Freeways[2]	Principal Arterial			Principal Arterial		
Arterials	Principal Arterial	Urban Principal Arterial (Other)[2]	Principal Arterial	Principal Arterial		Principal Arterial		Regional Trafficway/Major City Traffic Street
	Major Arterial[3]		Major Arterial	Arterial/Boulevard	Major Arterial	Major Arterial	Major Arterial[2]	Major City Traffic Street
	Minor Arterial[4]	Urban Minor Arterial	Minor Arterial		Minor Arterial	Minor Arterial	Minor Arterial	District Collector
	Rural Arterial	Rural Principal/Minor Arterial						
Collectors	Major Collector	Urban Collector	Collector of Regional Significance	Collector	Collector	Major Collector	Major Collector	District/Neighborhood Collector
	Rural Collector	Rural Collector						
	Neighborhood Collector			Community Street	Neighborhood Connector	Neighborhood Route	Neighborhood	Neighborhood Collector

[1] Metro's Regional Motor Vehicle Functional Classifications were used in this table. The functional classifications correspond to most appropriate Regional Street Design Classifications, which are listed in parentheses after the functional classification category. Table 3 uses the Regional Street Design Classifications, since they provide the street standard information.
[2] The AASHTO description of Urban Principal Arterials for Interstate, Freeways, and other are identical except in terms of access control. Interstate, freeway, and other principal arterials are stratified according to access, from fully controlled to partial or no control, respectively.
[3] Multnomah County major arterials can have a Regional Boulevard or Regional Street overlay.
[4] Multnomah County minor arterials can have a Community Boulevard or Community Street overlay.

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION NAME	**FREEWAY**	**Urban Principal Arterial—Interstate**	**Principal Arterial** (Regional Street Design Classifications: Freeway, Highway, Urban Road, Rural Road)	**Freeway**		**Principal Arterial**	**Arterial Highway**	**Regional Trafficway**
Connectivity	Inter-state; inter-regional; most do not have an origin or destination in Multnomah County	Serves the major centers of activity of urbanized areas, the highest traffic volume corridors, and the longest trip desires; carries most of the trips entering and leaving the urban areas as well as most of the through movements bypassing the central city, and significant intra-area travel; system provides continuity for all rural arterials that intercept the urban boundary; service to abutting land use subordinate to travel service to major traffic movements	Should provide an integrated system that is continuous throughout the urbanized area and should also provide for statewide continuity of the rural arterial system; should serve the central city, regional centers, industrial areas and intermodal activities; also form the primary connection between neighbor cities and the urban area	Regional, statewide, interstate		Typically are freeways and state highways that provide the highest level of connectivity; connect over the longest distance and are less frequent than other arterials or collectors; generally span several jurisdictions and many times have statewide importance	Regional, statewide or interstate	Interregional district movement that has only one trip end in a transportation district or to serve trips that bypass a district completely; should connect to other Regional Trafficways, Major City Traffic Streets, and District Collectors; should serve the Central City, regional centers, industrial areas, and intermodal facilities
Volume; posted speed	40,000 to 100,000 ADT; high speed	Highest; system should carry 40 to 65 percent of total traffic volume		High volume—excess of 60,000 per day; high posted speed				Direct interregional traffic to use Regional Trafficways and manage these facilities to maximize their existing capacity (Policy 6.16, Objective A)
Access	access to abutting properties is prohibited	Fully controlled access		Fully controlled property access				Work with ODOT to manage the location, spacing, and type of road and street intersections on Regional Trafficways (Policy 6.16 A, Objective A)
Ped; bike	Ped and bike traffic on urban freeways are prohibited			Bicycle and pedestrian travel within these corridors is provided either on parallel streets or on dedicated pathways				
Transit		Carries important intra-urban as well as intercity bus routes		Transit service, if it is provided, consists of express buses or fixed-guideway service such as light rail				
Freight			Should connect key freight routes within the region to points outside the region, with an emphasis on mobility; freight movement should not be restricted	Grade separated interchanges			Built, operated and maintained by the ODOT	Connect key freight routes within the region to points outside the region

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION NAME	**EXPRESSWAY**	**Urban Principal Arterial—Other Freeways**	**Principal Arterial** (Regional Street Design Classifications: Freeway, Highway, Urban Road, Rural Road)			**Principal Arterial**		
Connectivity	Primary: interregional; secondary: regional and intercity	Serves the major centers of activity of urbanized areas, the highest traffic volume corridors, and the longest trip desires; carries most of the trips entering and leaving the urban areas as well as most of the through movements bypassing the central city, and significant intra-area travel; system provides continuity for all rural arterials that intercept the urban boundary; service to abutting land use subordinate to travel service to major traffic movements	Should provide an integrated system that is continuous throughout the urbanized area and should also provide for statewide continuity of the rural arterial system; should serve the central city, regional centers, industrial areas and intermodal activities; also form the primary connection between neighbor cities and the urban area			Typically are freeways and state highways that provide the highest level of connectivity; connect over the longest distance and are less frequent than other arterials or collectors; generally span several jurisdictions and many times have statewide importance		
Volume; posted speed	40,000 to 85,000 ADT; moderate	System should carry 40 to 65 percent of total traffic volume						
Access	Limited and controlled to preserve capacity; cross streets are grade separated or limited to a few intersections with arterial streets. They typically have a center median and do not provide access to adjacent land uses	Almost fully or partially controlled access						
Ped; bike	Pedestrian and bike facilities may be provided along the expressway, often on separated facilities							
Transit		Carries important intra-urban as well as intercity bus routes						
Freight	Accommodate substantial traffic volumes including truck traffic		Should connect key freight routes within the region to points outside the region, with an emphasis on mobility; freight movement should not be restricted					

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**PRINCIPAL ARTERIAL**	**Urban Principal Arterial (Other)**	**Principal Arterial** (Regional Street Design Classifications: Freeway, Highway, Urban Road, Rural Road)	**Principal Arterial**		**Principal Arterial**		**Regional Trafficway/Major City Traffic Street**
Connectivity	Connect to freeways and highways which serve travelers without an origin or destination in the County--interstate and interregional traffic, including trucks, is in addition to regional traffic traveling between cities and counties, and traffic generated by intensive and higher density land uses along the arterial corridor	Serves the major centers of activity of urbanized areas, the highest traffic volume corridors, and the longest trip desires; carries most of the trips entering and leaving the urban areas as well as most of the through movements bypassing the central city, and significant intra-area travel; system provides continuity for all rural arterials that intercept the urban boundary; service to abutting land use subordinate to travel service to major traffic movements	Should provide an integrated system that is continuous throughout the urbanized area and should also provide for statewide continuity of the rural arterial system; should serve the central city, regional centers, industrial areas and intermodal activities; also form the primary connection between neighbor cities and the urban area	Provide a high level of mobility for regional and interregional travel		Typically are freeways and state highways that provide the highest level of connectivity; connect over the longest distance and are less frequent than other arterials or collectors; generally span several jurisdictions and many times have statewide importance		Regional Trafficway: Interregional district movement that has only one trip end in a transportation district or serves trips that bypass a district completely; should connect to other Regional Trafficways, Major City Traffic Streets, and District Collectors; should serve the Central City, regional centers, industrial areas, and intermodal facilities Major City Traffic Street: Principal route for traffic that has at least one trip end within a transportation district; provide connections among Central City, regional centers, town centers, industrial areas, and intermodal facilities; serve as primary connections to Regional Trafficways and serve major activity centers in each district
Volume; design speed	20,000 to 40,000 ADT; 35 to 45 mph	System should carry 40 to 65 percent of total traffic volume		35,000 to 60,000 ADT; 45 to 55 mph				Direct interregional traffic to use Regional Trafficways and manage these facilities to maximize their existing capacity (Policy 6.16, Objective A)
Access	Access to adjacent land uses is limited to preserve the traffic capacity and reduce congestion along the principal arterial street	Partial or no control of access						Work with ODOT to manage the location, spacing, and type of road and street intersections on Regional Trafficways (Policy 6.16 A, Objective A) Develop access management plans for other City streets as needed to ensure the safe and efficient operation of these facilities (Policy 6.16, Objective A)
Ped; bike	Ability to move auto, truck and regional bicycle traffic is preserved			On-street bike lanes; wide sidewalks separated from the street				

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Transit		Carries important intra-urban as well as intercity bus routes		Transit service generally consists of regional or express bus service with relatively infrequent stops				
Freight	Trafficways designated as National Highway System routes are classified as Principal Arterials		Should connect key freight routes within the region to points outside the region, with an emphasis on mobility; freight movement should not be restricted					Connect key freight routes within the region to points outside the region

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION NAME	**MAJOR ARTERIAL**		**Major Arterial** (Regional Street Design classifications: Regional Boulevard, Regional Street, Urban Road, Rural Road)	**Arterial/ Boulevard**	**Major Arterial**	**Major Arterial**	**Major Arterial**	**Major City Traffic Street**
Connectivity	Carry traffic between cities in the County as part of the regional trafficway system; the major fixed-route transit network corresponds with arterial street corridors; substantial commute movements **Regional boulevard overlay:** Serve multi-modal travel needs of the region's most intensely developed activity centers; more inventive land use oriented to the street **Regional street overlay:** serve the multi-modal needs of corridors, inner and outer residential neighborhoods, and some main streets		Provide general mobility for travel within the region; connect the central city, regional centers, industrial areas and intermodal facilities	**Arterial:** Accommodate the majority of regional travel through Gresham; provide access to major activity centers **Boulevard:** Located in the Gresham Regional Center and Rockwood Town Center to support adjacent high-density, mixed-use development; Boulevards are used to connect centers (e.g. Burnside)	Serve longer through trips and interconnect communities within the region; also serve shorter, more localized travel within a community, linking major commercial, residential, industrial, and institutional areas	Interconnect and support the principal arterial highway system, linking major commercial, residential, industrial, and institutional areas; typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street; many of these routes connect to cities surrounding Fairview	Serve to interconnect and support the arterial highway system; link major commercial, residential, industrial and institutional areas; typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street. many of these routes connect to surrounding cities in the metropolitan area	Principal route for traffic that has at least one trip end within a transportation district; provide connections among Central City, regional centers, town centers, industrial areas, and intermodal facilities; serve as primary connections to Regional Trafficways and serve major activity centers in each district
Volume	16,000 to 29,000 ADT; 35 to 45 mph		System should carry 40 to 65 percent of total VMT	**Arterial:** 20,000 to 40,000 ADT; 35 to 45 mph **Boulevard:** 20,000 to 35,000 ADT; 25 to 35 mph	10,000 to 30,000 ADT			
Access	Controlled access to regional land uses along the corridor; design and management emphasizes preservation of ability to move auto and transit traffic by limiting accesses **Regional street overlay:** Provide a higher level of local access than regional streets				Many street connections and some driveways, although combined driveways are preferable			Develop access management plans for other City streets as needed to ensure the safe and efficient operation of these facilities (Policy 6.16, Objective A)

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Ped; bike	Also accommodate regional bikeways and pedestrian movements; priority may be given to pedestrian-oriented land uses **Regional boulevard overlay:** Include bike lanes and wide sidewalks **Regional street overlay:** Pedestrian buffering from street; balanced multi-modal function; corridor land use set back from the street			**Arterial:** On-street bike lanes; sidewalks **Boulevard:** On-street bike lanes; wide sidewalks to accommodate high levels of pedestrian travel	Mix a significant amount of motor vehicle traffic with bicycle (bike lanes) and pedestrian travel (broad sidewalks, special crossing amenities, buffering			Provide planned bicycle facilities in conjunction with street improvements or develop equally safe and convenient alternative access for bicycles on parallel streets when the appropriate bikeway facility cannot be provided on the designated street because of severe environmental or topographical constraints, unacceptable levels of traffic congestion, or the need to retain on-street parking (Policy 11.10 F); include sidewalks on both sides of all new street improvement projects, except where there are severe topographical or natural resource constraints or when consistent with the Pedestrian Design Guide (Policy 11.10 G)
Transit	Priority may be given to transit-oriented land uses			**Arterial:** Primary bus routes with frequent bus stops located to serve major destinations **Boulevard:** Primary bus routes with frequent bus stops	Mix a significant amount of motor vehicle traffic with public transportation (substantial amenities at stops and station areas)			Include improvements that enhance transit operations, safety, and travel times in projects on existing or planned transit routes (Policy 11.10 H)
Freight	Traffic includes trucks and goods delivery		Freight movement should not be restricted; emphasis on mobility					Improve streets within Freight Districts and on truck-designated streets to facilitate truck movement (Policy 11.10)

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**MINOR ARTERIAL**	**Urban Minor Arterial**	**Minor Arterial** (Regional Street Design Classifications: Community Boulevard, Community Street, Urban Road, Rural Road)		**Minor Arterial**	**Minor Arterial**	**Minor Arterial**	**District Collector**
Connectivity	Lowest order arterial facility in the regional street network; but have a high degree of connectivity between communities; land uses along the corridor are a mixture of community and regional activities **Community boulevard overlay:** located within the most intensely developed activity centers with development oriented to the street; landscaped medians, noon street parking **Community street overlay:** higher level of street connectivity than regional streets; on-street parking; may have a median	Accommodates trips of moderate length at a lower level of travel mobility than principal arterials; distributes travel to geographic areas smaller than those identified with the higher system; urban connections to rural roads	Connect town centers, corridors, main streets, and neighborhoods to nearby regional centers and other major destinations; connect to major arterials, collectors, local streets and some principal arterials where appropriate; complement and support the arterial and major arterial systems; serve shorter trips than principal and major arterials, and therefore must balance mobility and accessibility demands		Serve shorter, more localized travel within a community	Interconnect and support the principal arterial highway system, linking major commercial, residential, industrial, and institutional areas; typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street; many of these routes connect to cities surrounding Fairview	Serve to interconnect and support the arterial highway system; link major commercial, residential, industrial and institutional areas; typically spaced about one mile apart to assure accessibility and reduce the incidence of traffic using collectors or local streets in lieu of a well placed arterial street; many of these routes connect to surrounding cities in the metropolitan area	Distribute traffic from Major City Traffic Streets to streets of the same or lower classification and to serve trips that both start and end within a district; connect to Major City Traffic Streets, other collectors, and local streets, and where necessary, to Regional Trafficways
Volume; design speed	8,000 to 16,000 ADT (5,000 to 12,000 ADT for rural arterial); 35 to 45 mph	Minor arterial and principal arterial systems together should carry 65 to 80 percent of total traffic volume	System should carry 65 to 80 percent of total VMT					
Access	Access management may be implemented to preserve traffic capacity **Community street overlay:** provide a higher level of local access than regional streets	More emphasis on land access than higher arterial system						

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Ped; bike	Provide major links in the regional road and bikeway networks; are significant links in the local pedestrian system **Community boulevard overlay:** balanced multi-modal function; wide sidewalks							Provide planned bicycle facilities in conjunction with street improvements or develop equally safe and convenient alternative access for bicycles on parallel streets when the appropriate bikeway facility cannot be provided on the designated street because of severe environmental or topographical constraints, unacceptable levels of traffic congestion, or the need to retain on-street parking (Policy 11.10 F); include sidewalks on both sides of all new street improvement projects, except where there are severe topographical or natural resource constraints or when consistent with the Pedestrian Design Guide (Policy 11.10 G)
Transit	Provide for transit corridors	May carry local bus routes						Include improvements that enhance transit operations, safety, and travel times in projects on existing or planned transit routes (Policy 11.10 H)
Freight	Provide for truck mobility		May serve as freight routes, providing both access and mobility					Improve streets within Freight Districts and on truck-designated streets to facilitate truck movement (Policy 11.10)

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**RURAL ARTERIAL**	**Rural Principal/ Minor Arterial**						
Connectivity	Rural arterial roads are the primary means of access into the County's large rural districts, and often connect between counties to accommodate through movements. Rural arterials connect to freeways or highways, and link rural collector and local roads to the urban area and other regions	Corridor movement with trip length and density suitable for substantial statewide or interstate travel; integrated movement without stub connections except where unusual geographic or traffic flow conditions dictate otherwise						
Volume; design speed	5,000 to 12,000 ADT; carry greater traffic volumes than rural collector roads, including commuters and other home-based trips	Relatively high travel speeds						
Access								
Ped; bike	Carry recreational trips involving bicycles and equestrians							
Transit								
Freight	Carry natural resource trips involving trucks							

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**MAJOR COLLECTOR**	**Urban Collector**	**Collector of Regional Significance** (Regional Street Design Classifications: Community Boulevard, Community Street, Urban Road, Rural Road)	**Collector**	**Collector**	**Major Collector**	**Major Collector**	**District/Neighborhood Collector**
Connectivity	Typically provide direct access between residential, industrial, and commercial developments, schools and parks	Provides traffic circulation within residential neighborhoods and commercial and industrial areas; facilities may penetrate residential neighborhoods, distributing trips from the arterials through the area to their ultimate destinations and collecting traffic from local streets in residential neighborhoods to channel it into the arterial system; in the central business district, the system may include the entire street grid	Operate at community level to provide local connections to the minor and major arterial system; disperse arterial level traffic over a number of lesser facilities where an adequate street network exists; help define appropriate collector level movement between jurisdictions; connects neighborhoods to nearby centers, corridors, station areas, main streets; connect to minor and major arterials and other collectors, as well as local streets	Access between neighborhoods or from neighborhoods to the arterial system; emphasis on collection and distribution of trips within an arterial grid	Serve neighborhood traffic and provide local alternatives to arterials; provide both circulation and access within residential and commercial areas, helping to disperse traffic that might otherwise use the arterial system for local travel	Provide both access and circulation within residential and commercial/industrial areas; differ from arterials in that they provide more of a citywide circulation function, penetrate residential neighborhoods, distributing trips from the neighborhood and local street system	Provide both access and circulation within neighborhoods and commercial/industrial areas; differ from arterials in that they provide more of a citywide circulation function; penetrate residential neighborhoods, distributing trips from the local street system and distribute it to and from the arterial system	Distribute traffic from Major City Traffic Streets to streets of the same or lower classification and to serve trips that both start and end within a district; connect to Major City Traffic Streets, other collectors, and local streets, and where necessary, to Regional Trafficways
Volume; design speed	2,000 to 12,000 ADT; 35 mph	System should carry 5 to 10 percent of total traffic volume	Fewer motor vehicles than arterials—system should carry 5 to 10 percent of VMT (reduced travel speeds as compared with arterials)	10,000 to 20,000 ADT; 25 to 35 mph	1,000 to 10,000 ADT			
Access				Land is directly accessible	Access control on collectors is lower than arterials, and direct driveway connections from residential, commercial, and employment uses are allowed, but are few and are shared when possible	Do not require as extensive control of access as arterials	Do not require as extensive control of access as arterials	
Ped; bike	Link neighborhoods to the regional system of bicycle and automobile streets			Bike lanes and sidewalks provided	Bicycle and pedestrian treated the same as an arterial, but less extensive			Provide planned bicycle facilities in conjunction with street improvements or develop equally safe and convenient alternative access for bicycles on parallel streets when the appropriate bikeway facility cannot be provided on the designated street because of severe environmental or topographical constraints, unacceptable levels of traffic congestion, or the need to retain on-street parking (Policy 11.10 F); include sidewalks on both sides of all new street improvement projects,

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Transit	Basic transit service	May carry local bus routes		Transit service consists of secondary routes;	Transit treated the same as on an arterial, but less extensive			except where there are severe topographical or natural resource constraints or when consistent with the Pedestrian Design Guide (Policy 11.10 G) Include improvements that enhance transit operations, safety, and travel times in projects on existing or planned transit routes (Policy 11.10 H)
Freight	Also utilized to access industrial and employment areas and other locations with large truck and over-sized load volumes							Improve streets within Freight Districts and on truck-designated streets to facilitate truck movement (Policy 11.10)

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**RURAL COLLECTOR**	**Rural Collector (Major and Minor)**						
Connectivity	Well connected in rural communities to distribute automobile traffic over large areas and generally connect to urban streets or rural arterials	Primarily intracounty rather than statewide importance; predominate travel distances are shorter than on arterials						
Volume; design speed	1,000 to 4,000 ADT	Moderate speeds						
Access	Primary access is provided to land uses adjacent to the facility and over large rural districts							
Ped; bike	May also provide for recreational trips by auto, bicycle and equestrian							
Transit								
Freight	Provide for necessary truck transport (agricultural, timber and minerals) out of rural districts							

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
CLASSIFICATION	**NEIGHBORHOOD COLLECTOR**			**Community Street**	**Neighborhood Connector**	**Neighborhood Route**	**Neighborhood**	**Neighborhood Collector**
Connectivity	Provide access primarily to residential land uses and link neighborhoods to higher order roads; through or non-local traffic is discouraged			Facilitate travel within the community and neighborhoods; emphasis on serving adjacent land uses	Serve residential neighborhoods and provide connectivity to the collector and arterial street system; they are intended to serve travel between neighborhoods and provide options to the arterial and collector streets for travel within the community	Provide connectivity to collectors or arterials; used by residents in the area to get into and out of the neighborhood, but do not serve citywide/large area circulation; traffic from cul-de-sacs and other local streets may drain onto neighborhood routes to gain access to collectors or arterials	Provide connectivity to collectors or arterials; used to get out of the neighborhood, but don't serve as citywide circulation; traffic from cul-de-sacs and other local streets may drain onto Neighborhood routes to gain access to collectors or arterials	Distribute traffic from Major City Traffic Streets or District Collectors to Local Service Streets and to serve trips that both start and end within areas bounded by Major City Traffic Streets and District Collectors; connect to Major City Traffic Streets, District Collectors, and other Neighborhood Collectors, as well as to Local Service Streets; although some may have a regional function, they should be designed to operate as neighborhood streets
Volume; design speed	500 to 4,500 ADT			3,500 to 10,000 ADT; 25 to 35 mph	Serve more traffic than local streets, but still less than 5,000 ADT	Generally have more traffic than local streets because neighborhood routes have greater connectivity	More traffic than local streets	Manage traffic consistent with the land uses they serve and to preserve and enhance neighborhood livability (Policy 6.13)
Access				Emphasis on serving adjacent land uses				
Ped; bike				Bike lanes and sidewalks provided to facilitate neighborhood access	Street design elements include sidewalks, bike lanes depending on traffic volumes, on-street parking and a landscaped buffer between travel lanes and sidewalks			Provide planned bicycle facilities in conjunction with street improvements or develop equally safe and convenient alternative access for bicycles on parallel streets when the appropriate bikeway facility cannot be provided on the designated street because of severe environmental or topographical constraints, unacceptable levels of traffic congestion, or the need to retain on-street parking (Policy 11.10 F); include sidewalks on both sides of all new street improvement projects, except where there are severe topographical or natural resource constraints or when consistent with the Pedestrian Design Guide (Policy 11.10 G)

Functional Classifications Comparison—Descriptions and Definitions

	Multnomah County and Wood Village	AASHTO	METRO	City of Gresham	Pleasant Valley Concept Plan	City of Fairview	City of Troutdale	City of Portland
Transit				Transit service, if provided, consists of neighborhood circulation routes				Include improvements that enhance transit operations, safety, and travel times in projects on existing or planned transit routes (Policy 11.10 H)
Freight						Street length is typically about a quarter to a half mile total; neighborhood traffic management measures are often appropriate	Usually long relative to local streets (at least 500 to 1,000 feet) measures such as neighborhood traffic management are needed; generally have residential frontage	Improve streets within Freight Districts and on truck-designated streets to facilitate truck movement (Policy 11.10)

Appendix B
Functional Classifications Designations by Roadway Segment Table

Functional Classification Designations by Roadway Segment - East Multnomah County

Roadway	Multnomah County	City of Gresham	City of Wood Village	City of Fairview	City of Troutdale	Metro	Pleasant Valley
I-84	Freeway	Freeway	Freeway	Freeway	Freeway	Principal Arterial (Freeway)	
US 26/Mount Hood Hwy/Powell Blvd							
west boundary to Eastman Pkwy	Minor Arterial	Arterial				Major Arterial	
Eastman Pkwy to Hogan Rd	Major Arterial	Arterial				Major Arterial	
Hogan Rd to Burnside Rd	Major Arterial	Arterial				Minor Arterial	
south of SE Powell Valley Rd	Principal Arterial	Principal Arterial				Major Arterial	
new alignment from Hogan Rd and Roberts to south boundary						Principal Arterial (Highway)	
Glisan							
162nd Ave to 207th Ave	Major Arterial	Arterial		Major Arterial		Minor Arterial	
207th Ave to 242nd Ave (north side of street from 238th/242nd Ave to 223rd Ave is in Wood Village; south side is in Gresham	Major Arterial	Arterial	Major Arterial	Major Arterial		Major Arterial	
SW Cherry Park Rd (South)							
242nd Ave to end (257th Ave) (south) (Cherry Park Rd in Troutdale)	Minor Arterial				Minor Arterial	Minor Arterial	
257th Ave to end	Major Collector				Major Collector	*Collector of Regional Significance*	
242nd Ave							
Hogan Rd (Burnside Rd to Glisan St)	Major Arterial *Principal Arterial*	Principal Arterial			Major Arterial *Principal Arterial*	Principal Arterial (Highway)	
south of NE Burnside Rd and north of Powell Blvd	Major Arterial	Arterial w/transit				Principal Arterial (Highway)	
south of Powell Blvd	Major Arterial	Arterial w/transit				Principal Arterial (Highway)	
Proposed 242nd Ave Connector	Principal Arterial					Principal Arterial (Highway)	
238th Dr							
north of I-84	Major Collector *Minor Arterial*		Minor Arterial			Minor Arterial	
south of I-84	Minor Arterial		Minor Arterial[1]			Minor Arterial	
Proposed 238th Dr Extension (Sandy Blvd to Marine Dr)	Major Collector				Major Collector	*Collector of Regional Significance*	
Halsey St							
162nd Ave to 182nd Ave	Major Arterial	Arterial w/transit				Major Arterial	
182nd Ave to 192nd Ave	Major Arterial	Arterial w/transit				Minor Arterial	
192nd Ave to 207th Ave	Minor Arterial	Arterial w/transit	Minor Arterial	Minor Arterial	Minor Arterial	Minor Arterial	
207th Ave to end (north and south sides vary between Wood Village and Fairview from 244th Ave to Fairview Ave; in Troutdale between 244th Ave to HCRH)	Major Arterial		Minor Arterial	Minor Arterial	Minor Arterial	Minor Arterial	
Sandy Blvd							
92nd Ave of 207th Ave	Minor Arterial	Arterial w/transit		Minor Arterial		Major Arterial	
207th Ave to end (north and south sides vary between Wood Village and Fairview from Fairview city limits to terminus)	Major Collector *Minor Arterial*		Minor Arterial	Minor Arterial		Collector of Regional Significance *Minor Arterial*	
Historic Columbia River Hwy	Major Collector				Major Collector	Collector of Regional Significance	
207th Ave							
north of I-84	Major Collector *Major Arterial*			Major Arterial		Major Arterial	
south of I-84	Major Arterial			Major Arterial		Major Arterial	
223rd Ave							
NW Fairview Ave/Blue Lake Rd (north of Glisan St)	Major Collector		Major Collector	Major Collector		Collector of Regional Significance	
Glisan St to Halsey St (east side of street from Glisan St to Arata Rd is in Wood Village; west side is in Fairview)	Major Arterial	Arterial w/transit	Major Collector			Major Arterial	
Eastman Pkwy							
Burnside St to Powell Blvd	Major Arterial	Boulevard w/transit				Major Arterial	
SW Towle Ave (from Powell Blvd to end (ends @Butler Rd)		Collector				Collector of Regional Significance	
Towle Ave							
Powell Blvd to Binford Pkwy	Minor Arterial	Collector				Collector of Regional Significance	
Binford Pkwy to Butler Rd	Major Collector	Collector				Collector of Regional Significance	
Wood Village Blvd							
Proposed Halsey St to Arata Rd (abuts east City of Wood Village boundary)	Major Collector			Major Collector		*Collector of Regional Significance*	
Arata Rd to Glisan St	Major Collector		Neighborhood Collector *Major Collector*			*Collector of Regional Significance*	
Arata Rd (north and south sides vary between Wood Village and Fairview from 238th Ave to 223rd Ave)	Neighborhood Collector *Major Collector*		Neighborhood Collector *Major Collector*	Major Collector		*Collector of Regional Significance*	
Stark St							
162nd Ave to 181st Ave	Major Arterial	Arterial w/transit				Major Arterial	
181st Ave to 197th Ave	Major Arterial	Boulevard w/transit				Major Arterial	

Functional Classification Designations by Roadway Segment - East Multnomah County

Roadway	Multnomah County	City of Gresham	City of Wood Village	City of Fairview	City of Troutdale	Metro	Pleasant Valley
197th Ave to Kane Rd/SW 257th Ave	Major Arterial	Arterial w/transit				Major Arterial	
Kane Rd to Gresham/Troutdale boundary	Major Arterial	Collector			Major Arterial	Collector of Regional Significance *Major Arterial*	
east of Gresham/Troutdale boundary and west of Troutdale Rd	Major Arterial				Major Arterial	Collector of Regional Significance *Major Arterial*	
east of Troutdale Rd	Minor Arterial				Minor Arterial[2]	Collector of Regional Significance *Minor Arterial*	
Burnside St							
162nd Ave to 181st Ave	Major Collector	Community w/transit				Major Arterial	
181st Ave to Hogan Rd	Principal Arterial	Boulevard w/transit				Major Arterial	
SE Hogan Rd to NW of US 26/Powell	Principal Arterial	Principal Arterial				Major Arterial	
Mount Hood Hwy (to County boundary)	Principal Arterial	Principal Arterial				Major Arterial	
Division St							
174th Ave west boundary to Birdsdale Ave	Major Arterial	Arterial w/transit				Minor Arterial	
Birdsdale St to Burnside St	Major Arterial	Boulevard w/transit				Minor Arterial	
Burnside St to Kane Rd	Major Arterial	Arterial w/transit				Minor Arterial	
Kane Rd/Dr to city boundary	Major Collector	Community				Collector of Regional Significance	
Orient Dr (US 26 to Gresham boundary)	Minor Arterial	Arterial				Minor Arterial	
257th Ave/Kane Dr/Rd							
north of SW Cherry Park Rd	Major Arterial				Major Arterial	Major Arterial	
south of SW Cherry Park Rd	Major Arterial				Major Arterial[3]	Major Arterial	
south of Stark St to Division St	Major Arterial	Arterial w/transit				Major Arterial	
Division St to Powell Valley Rd	Major Arterial	Arterial				Major Arterial	
Powell Valley Rd to Orient Dr	Minor Arterial *Major Arterial*	Arterial				Major Arterial	
162nd Ave							
Halsey St to Stark St	Minor Arterial	Arterial				Collector of Regional Significance	
SE Foster Rd to PV plan limits	Major Collector					Collector of Regional Significance	Collector
172nd Av (SE Giese Rd to PV plan limits)	Rural Arterial *Major Arterial*[5]	Arterial				Major Arterial	Major Arterial
Proposed 174th connector	*Minor Arterial*[6]					*Minor Arterial*[6]	
181st Ave							
north boundary to I-84	Major Arterial					Minor Arterial *Major Arterial*	
I-84 to Burnside St	Principal Arterial	Arterial w/transit				Major Arterial	
Burnside St to Stark St	Major Arterial	Boulevard w/transit				Major Arterial	
182nd Ave							
Stark to Yamhill	Major Arterial	Boulevard w/transit				Major Arterial	
Yamhill St to SW Pleasant View Dr	Major Arterial	Arterial w/transit				Major Arterial	
Giese Rd to Cheldelin Rd	Major Collector					Collector of Regional Significance	Collector
190th Ave (PV plan limits)	Rural Arterial *Major Arterial*	Community w/transit				Major Arterial	Major Arterial
201st Ave (Sandy Blvd to Glisan St)	Major Collector	Collector				Collector of Regional Significance	
202nd Ave/NW Birdsdale Ave (Glisan St to Powell Blvd)	Major Collector	Collector				Collector of Regional Significance	
Foster Rd/SE Giese Rd (PV plan limits)	Rural Arterial					Minor Arterial	Minor Arterial
Clatsop St/Cheldelin Rd (PV plan limit to 190th Ave)	Rural Local					Minor Arterial	Minor Arterial
Jenne Rd	Rural Arterial *Local*[6]					Minor Arterial	Minor Arterial
Butler Rd (Regner Rd to Gresham boundary)	Neighborhood Collector	Collector				Collector of Regional Significance	Collector
Richey Rd (182nd Ave to 190th Ave)	Rural Collector *Major Collector*					Collector of Regional Significance	Collector
Marine Dr (east of 185th Ave)	Major Collector	Collector		Major Collector	Major Collector	Collector of Regional Significance	
Graham Rd	Major Collector				Major Collector[4]	*Collector of Regional Significance*	
Sundial Rd	Major Collector				Major Collector	*Collector of Regional Significance*	
Cochran Dr	Major/Rural Collector				Major Collector	*Collector of Regional Significance*	

Functional Classification Designations by Roadway Segment - East Multnomah County

Roadway	Multnomah County	City of Gresham	City of Wood Village	City of Fairview	City of Troutdale	Metro	Pleasant Valley
Troutdale Rd	Major/Rural Collector				Major Collector	Collector of Regional Significance	
185th Ave Extension	Major Collector	Collector				*Collector of Regional Significance*	
NE River Side Pkwy		Collector					
Wilkes Rd		Collector					
San Rafael St (181st Ave to 192nd Ave)	Major Collector	Collector				*Collector of Regional Significance*	
Powell Valley Rd							
Burnside Rd to Kane/257th Ave	Major Arterial	Collector				Minor Arterial	
257th Ave to 262nd Ave	Major Collector	Collector				Collector of Regional Significance	
Kane/257th Ave to east boundary	Major Collector	Collector				Collector of Regional Significance	
192nd Ave (Halsey St to Wilkes Rd)	Major Collector	Collector				*Collector of Regional Significance*	
Pleasant View Dr (SW Highland Dr to Powell Lp)	Neighborhood Collector *Major Collector*[5]	Collector[5]				Collector of Regional Significance[5]	
Powell Lp (SW Pleasant View Dr to W Powell Blvd)	Neighborhood Collector *Major Collector*[5]	Collector[5]				Collector of Regional Significance[5]	
Cleveland Ave (Division St to Stark St)	Major Collector	Collector				*Collector of Regional Significance*	
Regner Rd (SE Roberts Ave to south boundary)	Major Collector	Collector				Collector of Regional Significance	
Roberts Ave (US 26/E Powell Blvd to Hogan/242nd Ave)	Major Collector	Collector				*Collector of Regional Significance*	
Palmquist Rd (Hogan/242nd Ave to US 26/or SE Orient Dr)	Minor Arterial	Collector				Collector of Regional Significance	
244th Ave (Sandy Blvd to Halsey St)	Major Collector		Neighborhood Collector *Major Collector*				
Bluff Rd	Local Street *Rural Collector*						

Recommend amendment *Recommended Classification*

Within Multnomah County's design standard range, but not preferred

Do not recommend amending classification

County Classification will change when Pleasant Valley and Powell-Foster plans are implemented; Metro will add to 2003 RTP update

[1] (Halsey St to 242 Ave connector/Glisan St) The neighborhood collector classification is proposed at the time that an alternative north/south route to 238th Ave is built

[2] Shown on the Troutdale TSP Appendix A list as major collector

[3] Shown on the Troutdale TSP Appendix A list as major collector

[4] Shown on the Troutdale TSP Appendix A list as major collector/major arteria

[5] Will change when the Powell-Foster Community Plan in implemented

[6] The Powell-Foster Corridor Transportation Plan - Phase I recommends a new connector extending 174th Ave between Jenne Rd and Giese Rd that would be a 2-3 lane minor collector.

With the construction of this connector, Jenne Rd could be down classified as a local road between Foster Rd and the connector.

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Appendix C
Street Standards Table

Roadway Design Standards

Multnomah County	AASHTO	METRO and Pleasant Valley Plan	City of Gresham	City of Wood Village	City of Fairview	City of Portland
Principal Arterial 100' (80'-115') ROW Four 12' (11'-14') travel lanes Two 6' (5'-6') bike lanes Two 6' (0'-8') planter strips Two 7' (6'-8') sidewalks Two (optional) 14' (12'-16') medians/turn lanes	**Arterial** ROW: none given Four or more 10'-12' travel lanes (width determined by speed) Two 2' + shoulder 4'-30' median sidewalks depend on speed	**Principal** Four to six 12' travel lanes Two 6' bike lanes Two 8' planter strips Two 6' sidewalks 16' divided median	**Principal** 120' ROW Four (four to six) 12' travel lanes Two 6' bike lanes Two 6' planter strips Two 8' sidewalks 24' median/turn lane	**Principal/Major** 80'-115' ROW Four 12' travel lanes Two 6' bike lanes Two 6' planter strips Two 7' sidewalks 14' median/turn lane	**Principal/Major** 80'-115' ROW Four 11'-14' travel lanes Two 5'-6' bike lanes Two 0'-8' planter strips Two 6'-8' sidewalks 12'-15' median/turn lane	**Principal** Four travel lanes Striped bike lanes Sidewalks (optional buffer) On-street parking (limited)
Major Arterial 100' (80'-115') ROW Four 12' (11'-14') travel lanes Two 6' (5'-6') bike lanes Two 7' ~~6'~~ (0'-8') planter strips Two 7' (6'-8') sidewalks 14' (12'-16') median/turn lane ***Regional Boulevard Overlay***[1] 90' (90'-105') ROW Four 11' (11'-12') travel lanes Two 5' (5'-6') bike lanes Two 5' (5'-8') planting strips Two 6' (6'-8') sidewalks 14' (12'-14') median/turn lane ***Regional Street Overlay***[1] Four 12' travel lanes Two 6' bike lanes Two 6' sidewalks with 5'-8' pedestrian buffer One 14' (12'-14') median/turn lane		**Regional Boulevard** Four 11' (10'-11') travel lanes Two 5' bike lanes Two 15' (6'-15') sidewalks Two 7' planter strips One 10' (4'-12') median/turn lane Two 7' on-street parking (optional) **Regional Street** Four 12' (11'-12') travel lanes Two 6' (5'-6') bike lanes Two 6' (5'-6') sidewalks with 5' (4'-5') pedestrian buffer One 14' (14'-15') median/turn lane	**Arterial** 100' ROW Four 12' travel lanes Two 6' bike lanes Two 4' planter strips Two 6' sidewalks 16' median/turn lane **Boulevard** 115' ROW Four 11' travel lanes Two 6' bike lanes Two 4' planter strips Two 11' sidewalk 14' median/turn lane Two 7' parking lanes			Regional Main Street Four travel lanes Bike lanes or wide shoulders Sidewalks Medians/curb extensions On-street parking Regional Corridor Four travel lanes Striped bike lanes or wide shoulder Pedestrian buffer Sidewalks Medians/curb extensions On-street parking

Indicates standard that County needs to amend
Indicates standard is outside County's allowable range
Indicates standard is within County's allowable range, but not County's preferred standard
Numerical values in parenthesis identify the minimum and/or maximum values accepted by the jurisdiction; preceding number indicates preferred standard (predominant standard for Metro)

Roadway Design Standards

Multnomah County	AASHTO	METRO and Pleasant Valley Plan	City of Gresham	City of Wood Village	City of Fairview	City of Portland
Major Collector 80' (60'-97') ROW Two (2'-3):12' (10-12') travel lanes Two 6' (5'-6') bike lanes Two 6' (0'-8') planter strips Two 6' (6'-7') sidewalks 14' (10'-14') median/turn lane (optional)	**Urban Collector** ROW: 40'+ Two 10'-12'travel lanes Two 2'-12' shoulders/ parking lanes;eventually to be 4-travel lanes 2'-25' median treatment Two 4'-8' sidewalks		**Collector** 80' ROW Two 11' travel lanes Two 6' bike lanes Two 7' parking lanes Two 4' planter strips Two 6' sidewalks 12' median/turn lane	**Major** 60'-97' ROW Two 12' travel lanes Two 6' bike lanes Two 6' planter strips Two 6' sidewalks 12' median/turn lane	**Major**[2] 60'-97' ROW Two 10'-12' travel lanes Two 5'-6' bike lanes Two 0'-8' planter strips Two 6'-7' sidewalks 10'-14' median/turn lane	
Neighborhood Collector 60' (50'-72') ROW Two 11' (11'-12') travel lanes Two 5' bike lanes Two 7' (7' *one side-8' both sides*) parking lanes Two 2' (0'-5') planter strips Two 5' (4'-6') sidewalks			**Community Street** 70' ROW Two 11' travel lanes Two 6' bike lanes Two 7' parking lanes Two 4' planter strips Two 6' sidewalks	**Neighborhood** 50'-72' ROW Two 11' travel lanes Two 5' bike lanes Two 7' parking lanes Two 5' planter strips Two 5' sidewalks		**Community Corridor** Two travel lanes Striped bike lanes or shoulders On-street parking Sidewalks with buffers & amenities Medians/curb extensions
Rural Collector 60' (50'-80') ROW Two 12' (11'-12') travel lanes Two 6' (5'-8') shoulders	**Rural Collector** ROW: none given Two 10'-12' travel lanes Two 2'-12' shoulders/ parking lanes	**Urban/Rural** Two to four travel lanes Two bike/pedestrian ways or shoulders One median/turn lane				

[1] Can be applied to major arterial functional classification
[2] Can be applied to minor arterial functional classification

Indicates standard that County needs to amend
Indicates standard is outside County's allowable range
Indicates standard is within County's allowable range, but not County's preferred standard
Numerical values in parenthesis identify the minimum and/or maximum values accepted by the jurisdiction; preceding number indicates preferred standard (predominant standard for Metro)

Roadway Design Standards

Multnomah County	AASHTO	METRO and Pleasant Valley Plan	City of Gresham	City of Wood Village	City of Fairview	City of Portland
Minor Arterial 90' (80'-105') ROW Two (two to four) 11' (11'-12') travel lanes Two 6' (5'-6') bike lanes Two 6' (0'-8') planter strips Two 6' (5'-8') sidewalks 12' (12'-14') median/turn lane ***Community Boulevard Overlay***[2] 80' (80'-111') ROW Two (two to four) 11' (10'-12') travel lanes Two 5' (2'-6') bike lanes Two 5' planting strips Two 5' (5'-6') sidewalks 12' (12'-14') median/turn lane ***Community Street Overlay***[2] Two 11' travel lanes Two 5' bike lanes Two sides of 7' on street parking Two 12' sidewalks with 7' pedestrian buffer		**Community Boulevard** Two 11' (10'-11') travel lanes Two 5' bike lanes Two sides of 7' on-street parking Two 12' (6'-12') sidewalks with pedestrian buffer One 10' (4'-10') median/turn lane **Community Street** Two 11' travel lanes Two 5' bike lanes Two sides of 7' on street parking Two 12' (6'-15') sidewalks with 7' pedestrian buffer		**Minor** 80'-105' ROW Two 11' travel lanes Two 6' bike lanes Two 6' planter strips Two 6' sidewalks 12' median/turn lane	**Minor** 80'-105' ROW Two 11'-12' travel lanes Two 5'-6' bike lanes Two 0'-8' planter strips Two 5'-8' sidewalks 12'-14' median/turn lane	**Community Main Street** Max of four travel lanes Striped bike lanes or wide shoulder Sidewalks with trees Medians/curb extensions
Rural Arterial 60' (60'-90') ROW Two (two to four): 12' (11'-14') travel lanes Two 8' (6'-8') shoulders; if wider than 6' only need to pave 5'	**Rural Arterial** ROW: none given Two to four travel lanes (width determined by speed) Two 2' + shoulder 4'-30' median sidewalks depend on speed	**Urban/Rural** Two to four travel lanes Two bike/pedestrian ways or shoulders One median/turn lane				**Urban Road** Four travel lanes Striped bike lanes Median/turn lane

Indicates standard that County needs to amend
Indicates standard is outside County's allowable range
Indicates standard is within County's allowable range, but not County's preferred standard
Numerical values in parenthesis identify the minimum and/or maximum values accepted by the jurisdiction; preceding number indicates preferred standard (predominant standard for Metro)

Appendix D
Recommended Amendments to Policy 34 to Comply With the TPR

Appendix D
Recommended Amendments to Policy 34 to Comply with the TPR

TPR: 660-012-0045 Implementation of the TSP	Applicable Section of Policy 34: Trafficways	Comments	Recommended Amendments to Policy 34: Trafficways
(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors, and sites for their identified functions. Such regulations include:	Not applicable	In order to guide Multnomah County land use regulations, the following TPR (a-g) elements should be included in Policy 34.	Not applicable
(a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;	Policy F. Limiting the number of and consolidating ingress and egress points on arterials and major collectors to preserve traffic flow.	This section of Policy 34 addresses arterials and major collectors only. It does not address other classifications. As the TPR emphasizes limiting development on rural lands, Policy 34 should address access on rural local roads as well.	Policy F. Limiting the number of and consolidating ingress and egress points on arterials and major collectors to preserve traffic flow and on rural local roads to limit rural development, on rural lands to rural uses and densities, as necessary.
(b) Standards to protect future operation of roads, transitways and major transit corridors;	Policy B. Improving streets to the standards established by the classification system, where necessary, and/or appropriate to mitigate identified transportation problems. Strategies: B. Transportation Planning; 6. Modal Plans: Modal plans should be developed to establish truck, pedestrian, and transit networks on the County trafficways system in coordination with regional and local transportation plans….	Policy B does not address transit. Strategy B.6 does not address street standards.	Policy B. Improving streets to the standards established by the classification system, where necessary, and/or appropriate to mitigate identified transportation problems; and to accommodate existing and implement planned pedestrian, bicycle, and transit facilities, as established in the County, regional, and local transportation plans.
(d) A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;	Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses.	The 1995 IGAs with Fairview, Gresham, and Troutdale include a provision for coordination (Section III. Development Review and Permit Issuance; C. City-County Coordination). The Strategy could include language referring to the IGAs.	Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses. The development of the transportation system and land uses and amendments to land use plans should be made in accordance with the executed Intergovernmental Agreements with the cities of Fairview, Gresham, and Troutdale to ensure consistency with the functions, capacities, and level of service of facilities identified in the Multnomah County transportation planning documents.
(e) A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;	Policy I. Implementing the street standards chapter 11.60 and street standards codes and rules, including adherence to access control and intersection design guideline criteria, and establishing a procedure for allowing variances from that ordinance. Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans	Conditions of approval are addressed in the Administration and Procedures section (Chapter 37), Zoning Ordinance (11.15) and Land Division Ordinance (11.45) of the Multnomah County Code.	Not applicable

TPR: 660-012-0045 Implementation of the TSP	Applicable Section of Policy 34: Trafficways	Comments	Recommended Amendments to Policy 34: Trafficways
	and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses.		
(f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of [applications].	Not Applicable	Notice to agencies of land use applications is addressed in the Administration and Procedures section (Chapter 37), Zoning Ordinance (11.15) and Land Division Ordinance (11.45) of the Multnomah County Code.	Not applicable
(g) Regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and levels of service of facilities identified in the TSP.	Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses.	This TPR element is addressed in the IGAs between the County and local jurisdictions, for urban areas.	Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses. The development of the transportation system and land uses and amendments to land use plans should be made in accordance with the executed Intergovernmental Agreements with the cities of Fairview, Gresham, and Troutdale to ensure consistency with the functions, capacities, and level of service of facilities identified in the Multnomah County transportation planning documents.
(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth below. The purposes of this section are to provide for safe and convenient pedestrian, bicycle and vehicular circulation consistent with access management standards and the function of affected streets, to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if connections are provided, and which avoids wherever possible levels of automobile traffic which might interfere with or discourage pedestrian or bicycle travel. (3)(b)(B) Bikeways shall be required along arterials and major collectors. Sidewalks shall be required along arterials, collectors and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways	The purpose of this Policy is to direct the County to develop the existing trafficway system to maximize efficiency, and to consider the mobility of pedestrians by providing safe crossings. The County's Policy is to develop a safe and efficient trafficway system using the existing road network. Policy E. Providing a safe and convenient pedestrian environment with road crossings and sidewalk network designed for pedestrian travel. Policy 33C: It is the County's Policy to implement a bicycle/pedestrian system as an alternative transportation mode, furthering the opportunity for a balanced system by: Identifying streets with good bicycle access and travel potential on the map titled bikeways, which provides the framework for future bike route projects and assures that future street improvement projects on a designated route will be designed to accommodate bicycles.	Although Policy 34 addresses pedestrian facilities, it lacks an emphasis on connectivity. The policy does not mention bicycles. Policy 34 should reference Policy 33C, and Policy 33C should be amended to include language about pedestrian connectivity.	Policy E. Providing ~~a~~ safe and convenient bicycle and transit facilities and a pedestrian environment with road crossings and sidewalk network designed for pedestrian travel, in accordance with Policy 33C: Bikeways/Pedestrian System and Policy 35: Public Transportation.
(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been made that a public transit system is feasible, local governments shall adopt land use and subdivision regulations as provided in (a)–(f) below [related to pedestrian and transit connectivity]….	No language in Policy 34. Policy 35: Public Transportation: C. Making improvements to public transportation corridors which enhance rider convenience, comfort, access and reduced travel time, and ...G. Designating regional transit trunk routes, transit centers and park-and-ride lots as required by the regional	Policy 34 contains no mention of transit. It needs to reference Policy 35: Public Transportation.	Policy E. Providing ~~a~~ safe and convenient bicycle and transit facilities and a pedestrian environment with road crossings and sidewalk network designed for pedestrian travel, in accordance with Policy 33C: Bikeways/Pedestrian System and Policy 35: Public Transportation. Policy B. Improving streets to the standards established by

TPR: 660-012-0045 Implementation of the TSP	Applicable Section of Policy 34: Trafficways	Comments	Recommended Amendments to Policy 34: Trafficways
	transportation plan of the Portland Metropolitan Area as shown on the regional transit trunk route map.		the classification system, where necessary, and/or appropriate to mitigate identified transportation problems; and to accommodate existing and implement planned pedestrian, bicycle, and transit facilities, as established in the County, regional, and local transportation plans.
(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:	Policy G. Reducing reliance on the automobile and assuring that the Planned transportation system supports patterns of travel and land use which will avoid or mitigate problems of air pollution, Traffic congestion and community livability.	Language is adequate.	Not applicable
(a) Allow transit-oriented developments (TODs) on lands along transit routes;	Strategies: A. Trafficways, 3. Fostering Choice: The trafficway system should be managed to provide opportunities for choices among available travel modes so that reliance on automobiles as single-occupant vehicles can be reduced, and so that total vehicle miles traveled as a measure of automobile use per capita can be reduced in the future, in accordance with the state Transportation Planning Rule. Policy 35: Public Transportation Policies: A. Increasing overall density levels in the urban area, particularly at light rail stations, B. Locating population concentrations, commercial centers, employment centers, and public facilities in areas which can be served by public transportation.	Policy 35: Public Transportation does address TODs. The language in Policy 34 needs to reference Policy 35.	Strategies: A. Trafficways, 3. Fostering Choice: The trafficway system should be managed to provide opportunities for choices among available travel modes so that reliance on automobiles as single-occupant vehicles can be reduced, and so that total vehicle miles traveled as a measure of automobile use per capita can be reduced in the future, in accordance with the state Transportation Planning Rule and Policy 35: Public Transportation.
(b) Implements a demand management program to meet the measurable standards set in the TSP in response to 660-012-0035(4);	Policy G. Reducing reliance on the automobile and assuring that the Planned transportation system supports patterns of travel and land use which will avoid or mitigate problems of air pollution, Traffic congestion and community livability; Policy H. Encouraging ride-share and flextime programs to help meet the projected increase in travel demand. The County will work with metro and tri-met to develop ride-share programs, flextime and other transportation demand strategies to achieve the ride-share goal given in the regional transportation plan; and	Language is adequate.	Not applicable
(c) Implements a parking plan which: (A) Achieves a 10% reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses;	Policy 34 does not mention parking.	Policy 34 needs to include language about parking along trafficways under the County's jurisdiction. There may be discrepancies between County and city on-street parking standards. See Section 2.3 Street Standards, and Section 7.0 Recommendations in this report.	L. Ensuring that on-street parking is provided in accordance with County street standards and coordinating with cities to implement Metro's regional 10 percent reduction goal.
(6) In developing a bicycle and pedestrian circulation plan as required by 660-012-0020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian	The purpose of this Policy is to direct the County to develop the existing trafficway system to maximize efficiency, and to consider the mobility of pedestrians by	Although Policy 34 addresses pedestrian facilities, it lacks an emphasis on connectivity. The policy does not mention bicycles. Policy 34 should reference Policy 33C, and Policy	Policy E. Providing ~~a~~ safe and convenient bicycle and transit facilities and a pedestrian environment with road crossings and sidewalk network designed for pedestrian

TPR: 660-012-0045 Implementation of the TSP	Applicable Section of Policy 34: Trafficways	Comments	Recommended Amendments to Policy 34: Trafficways
trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.	providing safe crossings. The County's Policy is to develop a safe and efficient trafficway system using the existing road network. Policy E. Providing a safe and convenient pedestrian environment with road crossings and sidewalk network designed for pedestrian travel. Policy 33C: It is the County's Policy to implement a bicycle/pedestrian system as an alternative transportation mode, furthering the opportunity for a balanced system by: Identifying streets with good bicycle access and travel potential on the map titled bikeways, which provides the framework for future bike route projects and assures that future street improvement projects on a designated route will be designed to accommodate bicycles.	33C should be amended to include language about pedestrian connectivity.	travel, in accordance with Policy 33C: Bikeways/Pedestrian System and Policy 35: Public Transportation.
(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Not withstanding subsection (1) or (3) of this section, local street standards adopted to meet this requirement need not be adopted as land use regulations.	Policy I. Implementing the street standards chapter 11.60 and street standards codes and rules, including adherence to access control and intersection design guideline criteria, and establishing a procedure for allowing variances from that ordinance. Policy J. Considering and allowing for implementation of regional street design elements (as shown in *Creating Livable Streets: Street Design for 2040* (1997)) when planning for improvements to facilities designated on Metro's Regional Street Design Map. *[Added 1999, Ord. 926 § II]*	Policy 34 needs to include language specifically allowing for reduction of excessive standards (such as street width).	Policy J. Considering and allowing for implementation of regional street design elements, including reduction of excessive standards (as shown in *Creating Livable Streets: Street Design Guidelines* (Second Edition, June 2002)), when planning for improvements to facilities designated on Metro's Regional Street Design Map or on roadways in urban unincorporated areas.

660-012-0060 **Plan and Land Use Regulation Amendments**	**Policy 34**	**Comments**	**Recommended Amendments**
(1) Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility…. (2) A plan or land use regulation amendment significantly affects a transportation facility if it: (a) Changes the functional classification of an existing or planned transportation facility; (b) Changes standards implementing a functional classification system; (c) Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility; or (d) Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP. (5) In determining whether proposed land uses would affect or be consistent with planned transportation facilities as provided in 0060(1) and (2), local governments shall give full credit for potential reduction in vehicle trips for uses located in mixed-use, pedestrian-friendly centers, and neighborhoods as provided in (a)–(d) below…	Policy 34 does not contain language that explicitly seeks to protect transportation facilities from effects of plan or land use regulation amendments. Five of the policies in Policy 34 relate to this subsection of the TPR: Policy A. Maintaining a trafficway classification system; Policy B. Improving streets to the standards established by the classification system, where necessary, and/or appropriate to mitigate identified transportation problems; Policy C. Placing priority on maintaining the existing trafficways; Policy G. Reducing reliance on the automobile and assuring that the Planned transportation system supports patterns of travel and land use which will avoid or mitigate problems of air pollution, Traffic congestion and community livability; Policy H. Encouraging ride-share and flextime programs to help meet the projected increase in travel demand. The County will work with metro and tri-met to develop ride-share programs, flextime and other transportation demand strategies to achieve the ride-share goal given in the regional transportation plan.	Reference to the IGAs needs to be incorporated into Policy 34. IGAs need to be amended to include language protecting transportation facilities when local plans and regulations are amended. See Section 7.0 Recommendations in this report.	Strategies: B. Transportation Planning; 3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses. <u>The development of the transportation system and land uses and amendments to land use plans should be made in accordance with the executed Intergovernmental Agreements with the cities of Fairview, Gresham, and Troutdale to ensure consistency with the functions, capacities, and level of service of facilities identified in the Multnomah County transportation planning documents.</u>

Appendix E
Multnomah County Comprehensive Framework Plan
Policy 34: Trafficways
(Proposed Amendments)

Introduction

Trafficways are a vital part of the transportation system in Multnomah County, functioning to move people and goods between their origins and destinations. A hierarchy of trafficways provides necessary access to land uses, and mobility to travelers and commerce. The trafficway network accommodates several modes of travel within public right-of-way, and acknowledges differing transportation needs between the urban and rural areas of the County. Communication and power networks, and public utilities including storm and sanitary sewers, and water supply share the right-of-way with roads.

Trafficways are developed according to their functional classification, which distinguishes streets and roads, by their operational purposes. Many aspects are considered when classifying trafficways:

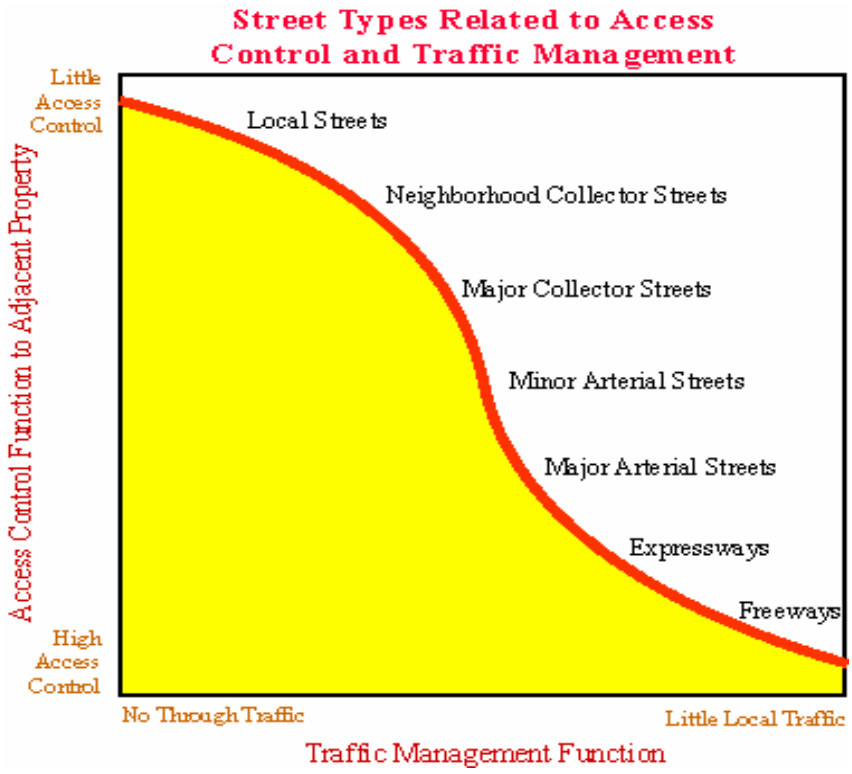
- Travel characteristics: trip length, origin and destination
- Intensity and density of land uses served: urban and rural
- Travel modes to be served: automobiles, bicycles, transit, trucks, and pedestrians
- Relationship between traffic movement and access management
- Projected traffic volumes and capacity requirements at acceptable levels of service

The hierarchy of trafficways generally progresses from low traffic volumes and low speeds to higher volumes and speeds. Trip types vary by origins and destinations, and by trip length and purpose: from local and neighborhood trips to countrywide and intra-regional travel, or inter-regional and interstate trips.

Access to property is inversely related to the mobility function of a trafficway. Access to adjacent property is greatest on local streets, but mobility is limited to local trips on local and neighborhood streets. The greatest level of mobility to the greatest number of travelers is provided by the freeway system, however, there is no direct property access provided by the interstate system.

County roads serve a distribution of trips between home and work, school, shopping and recreation, and from sources of materials and manufacturers to distributors.

The system of trafficways to meet the needs of County residents, visitors, and businesses are functionally identified by the following types of facilities. Each type of trafficway accommodates various modes of travel, and relates to land uses to which access is being provided.



LOCAL URBAN STREETS AND RURAL ROADS

Local streets provide access to abutting land uses on low traffic volume and low speed facilities. Their primary purpose is to serve local pedestrian, bicycle and automobile trips and limited public transportation use in urban areas; and auto and farm vehicle circulation with local pedestrian, bicycle and equestrian use in rural areas.

COLLECTOR STREETS

Collector streets distribute traffic between local streets and the arterial street network. They serve land uses over a broader corridor then local streets, but are not intended to serve trips that do not have either an origin or destination within the corridor. Collector streets provide for automobile, bicycle and pedestrian circulation and basic transit service.

Neighborhood Collector Streets

Neighborhood collector streets provide access primarily to residential land uses and link neighborhoods to higher order roads. They generally have higher traffic volumes than local streets but through or non-local traffic is discouraged.

Major Collector Streets

Major collector streets serve several purposes including linking neighborhoods to the regional system of bicycle and automobile streets, and basic transit service. They typically provide direct access between residential and commercial developments, schools and parks and carry higher volumes of traffic then neighborhood streets. Major collector streets area also utilized to access

industrial and employment areas and other locations with large truck and over-sized load volumes.

Rural Collector Roads
Rural collector roads are well connected in rural communities to distribute automobile traffic over large areas and generally connect to urban streets or rural arterials. Where rural collector streets connect roads in adjacent counties, through traffic will occur with volumes greater than local rural roads. They may also provide for recreational trips by auto, bicycle and equestrian. Primary access is provided to land uses adjacent to the facility and over large rural districts. Rural collector roads provide for necessary truck transport of (agricultural, timber and minerals) out of rural districts.

ARTERIAL STREETS

Arterial streets comprise the regional transportation network, and provide for travel between communities in the County, and between counties. Arterial streets accommodate the full array of travel modes with the regional bikeway system, fixed-route transit network, goods delivery and higher volume automobile traffic then collector streets. Arterial streets connect to freeways and expressways, and collector streets. More intensive land uses occur along arterial street corridors and at arterial street intersections.

Urban arterial roadways may be overlayed with a regional or community boulevard or street designation by Metro in the 2040 Growth Concept. Multnomah County acknowledges Metro's Street Design Guidelines for 2040. The design elements in the Street Design Guidelines will be considered on regional facilities under Multnomah County's jurisdiction in the urban area. *[Added 1999, Ord. 926 § II]*

Minor Arterial Streets
Minor arterial streets are the lowest order arterial facility in the regional street network. They typically carry less traffic volume then principal and major arterials, but have a high degree of connectivity between communities. Access management may be implemented to preserve traffic capacity. Land uses along the corridor are a mixture of community and regional activities. Minor arterial streets provide major links in the regional road and bikeway networks; provide for truck mobility and transit corridors; and are significant links in the local pedestrian system.

Major Arterial Streets
Major arterial streets carry high volumes of traffic between cities in the County as part of the regional trafficway system. The major fixed-route transit network corresponds with arterial street corridors. Priority may be given to transit- and pedestrian-oriented land uses. Traffic includes trucks and goods delivery, substantial commute movements and controlled access to regional land uses along the corridor. Design and management of major arterial streets emphasizes preservation of ability to move auto and transit traffic by limiting accesses while also accommodating regional bikeways and pedestrian movements.

Principal Arterial Streets
Principal arterial streets connect to freeways and highways, which serve travelers without an origin or destination in the County. This interstate and interregional traffic, including trucks, is in addition to regional traffic traveling between cities and counties, and traffic generated by intensive and higher density land uses along the arterial corridor. Thus, traffic volumes are high and access to adjacent land uses is limited to preserve the traffic capacity and reduce congestion

along the principal arterial street. The ability to move auto, truck and regional bicycle traffic is preserved. Trafficways designated as National Highway System routes shall be classified as Principal Arterial roadways.

Rural Arterial Roads
Rural arterial roads are the primary means of access into the County's large rural districts, and often connect between counties to accommodate through movements. Rural arterials connect to freeways or highways, and link rural collector and local roads to the urban area and other regions. Rural arterial roads carry greater traffic volumes then rural collector roads, including commuters and other home-based trips, natural resource trips involving trucks, and recreational trips involving autos, bicycles and equestrians.

EXPRESSWAYS

Expressways principally serve interregional travel, and secondarily, regional and intercity travel. They are designed for moderate speeds, with limited and controlled access to preserve capacity, and accommodate substantial traffic volumes including truck traffic. Cross streets are grade separated or limited to a few intersections with arterial streets. They typically have a center median and do not provide access to adjacent land uses. Pedestrian and bike facilities may be provided along the expressway, often on separated facilities.

FREEWAYS

Freeways are high-speed roadways with grade-separated interchanges. They function to move goods and people between states, and between regions within Oregon. Freeways carry high volumes of traffic, much of which does not have an origin or destination in Multnomah County. Access to abutting properties is prohibited. Pedestrian traffic and bicycle traffic on urban freeways are also prohibited.

OVERLAY CLASSIFICATION

In addition to a streets basic functional classification, an overlay classification is used to further describe the design or function of a facility. Included in the overlay classification are Regional and Community Boulevards, ~~and~~ Regional and Community Streets, and Green Streets as designated by Metro.

Scenic Routes
Scenic routes occur on streets that offer unique scenic views, and are used for recreational and scenic travel in addition to traffic appropriate to the facility functional classification. Unique designs and materials and other accommodations, or traffic restrictions, may be imposed to preserve and enhance the scenic character of the facility. Landscape treatments should incorporate native species that integrate roadway improvements with the scenic character of the area.

Industrial Streets
Industrial streets occur on roadways that either serve as a freight route identified in the Regional Transportation Plan or serve industrial use areas. The standards for asphalt and base for major and minor collectors and lower classifications are insufficient for truck traffic. Therefore the arterial asphalt and base standards need to be applied to non-arterial roadways carrying truck

traffic. Regardless of classification, the pavement section of trafficways designated with the industrial streets overlays shall be constructed to arterial standards as per the Multnomah County Design Standards. Part I – Design Manual, Section 4 – Pavement Design.

Boulevards *[Added 1999, Ord. 926 § II]*
Boulevards serve the multi-modal travel needs of the region's most intensely developed activity centers, including regional centers, station communities, town centers and some main streets. Boulevards are the continuation of the regional street network within more intensively developed activity centers. Boulevards are designed with special amenities that promote pedestrian, bicycle, and public transportation travel in the districts they serve.

Boulevards are classified as regional and community scale designs. Regional boulevards can be applied to the major arterial classification while community boulevards can be applied to the minor arterial classification. The Boulevard overlay classifications are designated in the Regional Transportation Plan and in local jurisdiction's Transportation System Plans and other transportation planning documents.

Regional Boulevards *[Added 1999, Ord. 926 § II]*
Regional boulevards consist of four or more vehicle lanes, balanced multi-modal function, and a broad right of way. Features highly desirable on regional boulevards include on-street parking, bicycle lanes, narrower travel lanes than throughways, more intensive land use oriented to the street, wide sidewalks, and may include a landscaped median.

Community Boulevards *[Added 1999, Ord. 926 § II]*
Community boulevards consist of four or fewer vehicle travel lanes, balanced multi-modal function, narrower right of way than a regional boulevard, landscaped medians, no-street parking, narrower travel lanes than throughways, more intensive land use oriented to the street, and wide sidewalks. Community boulevards are located within the most intensely developed activity centers with development oriented to the street. These are primarily regional centers, town centers, station communities and some main streets.

Streets *[Added 1999, Ord. 926 § II]*
Streets serve the multi-modal travel needs of corridors, inner and outer residential neighborhoods and some main streets. Streets typically are more vehicle-oriented and less pedestrian-oriented than boulevards, providing a multi-modal function with an emphasis on vehicle mobility. Streets are classified as regional and community designs. Regional streets can be applied to the major arterial roads, while the community streets can be applied to minor arterial roads. The Street overlay classifications are designated in the Regional Transportation Plan and in local jurisdiction's Transportation System Plans and other transportation planning documents.

Regional Streets *[Added 1999, Ord. 926 § II]*
Regional streets consist of four or more vehicle travel lanes, balanced multi-modal function, broad right of way, limited on-street parking, wider travel lanes than boulevards, corridor land use set back from the street, sidewalk with pedestrian buffering from street, and a raised landscaped median or, usually a continuous two way left turn lane.

Community Streets *[Added 1999, Ord. 926 § II]*

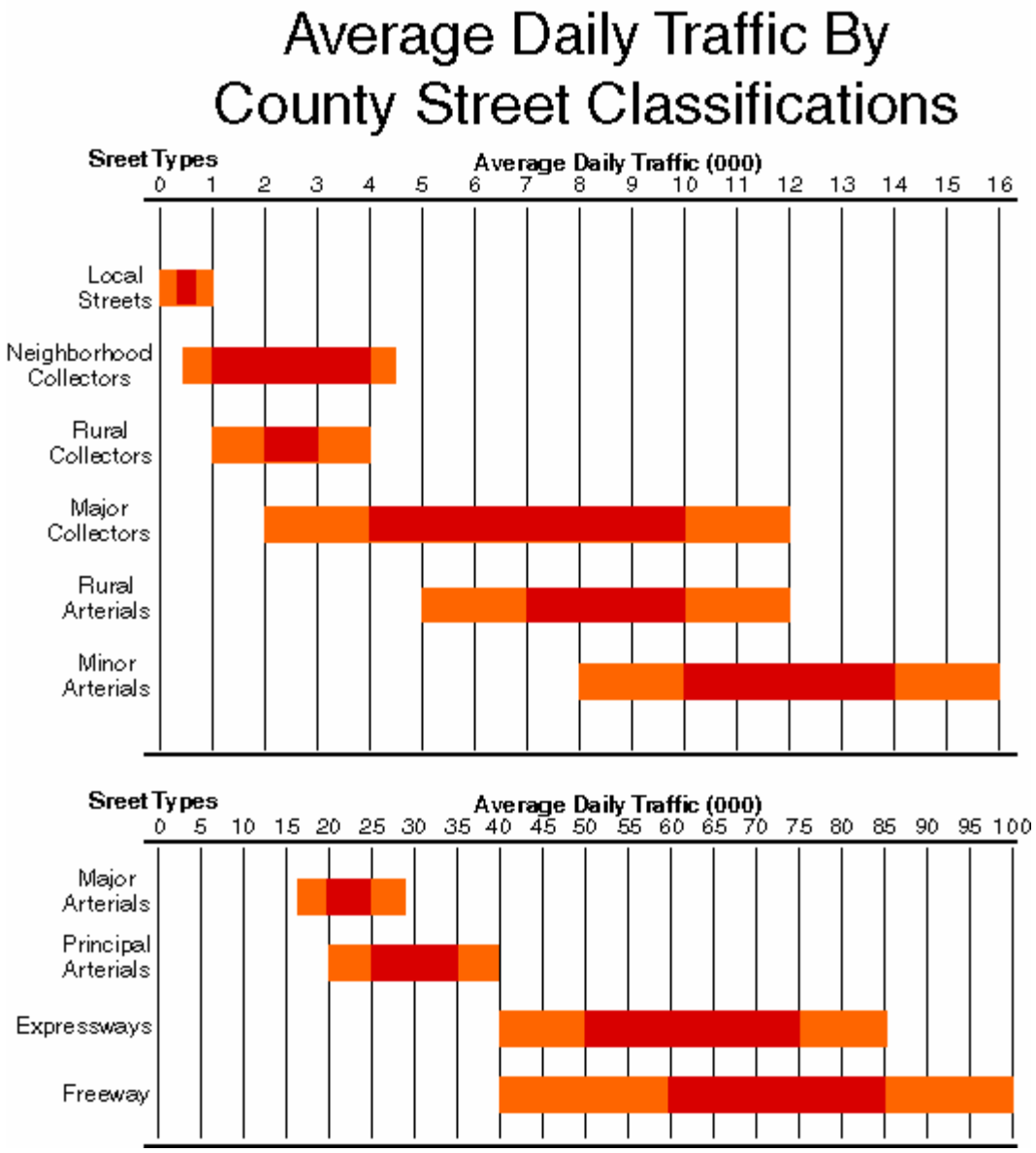
Community streets consists of two to four travel lanes, balanced multi-modal function, narrower right of way than regional streets, on-street parking, narrower or fewer travel lanes than regional streets and residential neighborhood and corridor land use set back from the street. Community streets provide a higher level of local access and street connectivity than regional streets. Community streets have the greatest flexibility in cross sectional elements. Depending on the intensity of adjacent land use and site access needs, community streets can have three different median conditions; center two way left turn lane, narrow landscaped median, or no median.

Green Streets

Green Streets are designed to incorporate a system of stormwater treatment within their right-of-way to protect the quality of the region's stream system. Green streets are designated according to the location-specific circumstances, including environmental conditions such as the soil conditions, water table, etc.; and surrounding land uses. The trafficways designated with green street overlay classifications are identified in the Regional Transportation Plan and in local jurisdiction's Transportation System Plans and other transportation planning documents. Multnomah County shall consider implementation of Green Streets design standards when developing a project listed in the County's Capital Improvement Program. Standards for Green Streets are in the Multnomah County Design Standards. Part I – Design Manual, Section 2 – Geometric Design.

TRAFFIC VOLUME GUIDELINES

The following chart illustrates the extent of traffic volumes by functional classification of each type of facility. The upper and lower limits are design guidelines, actual volumes may vary.



Transportation Corridor Study Areas

Existing streets, proposed new streets, or alternative alignments may undergo evaluation concerning future capacity or operational changes. The outcome of a corridor analysis, feasibility study or environmental analysis may result in a change in functional classification. Functional classifications within these study areas are subject to change in the future pending the outcome of the evaluation.

TRAFFIC VOLUME GUIDELINES

The chart: Average Daily Traffic by County Street Classification illustrates the extent of traffic volumes by functional classification. The upper and lower limits are design guidelines, actual volumes may vary.

The purpose of this Policy is to direct the County to develop the existing trafficway system to maximize efficiency, and to consider the mobility of pedestrians by providing safe crossings.

Policy 34

The purpose of this Policy is to direct the County to develop the existing trafficway system to maximize efficiency, and to consider the mobility of pedestrians by providing safe crossings.

The County's Policy is to develop a safe and efficient trafficway system using the existing road network, and by:

A. Maintaining a trafficway classification system;

B. Improving streets to the standards established by the classification system, where necessary, and/or appropriate to mitigate identified transportation problems and to accommodate existing implemented and planned pedestrian, bicycle (Policy 33c), and transit facilities (Policy 35) as established in the County, regional, and local transportation plans;

C. Placing priority on maintaining the existing trafficways;

D. Developing additional transportation facilities to meet community and regional transportation needs where capacity of the existing system has been maximized through transportation system management and demand management measures;

   Average Daily Traffic by County Street Classifications chart here

E. Providing ~~a~~ safe and convenient bicycle and transit facilities and a pedestrian environment with road crossings and sidewalk network designed for pedestrian travel in accordance with Policy 33c: Bikeways/Pedestrian System and Policy 35: Public Transportation;

F. Limiting the number of and consolidating ingress and egress points on arterials and major collectors to preserve traffic flow and on rural local roads to limit rural development, as necessary;

G. Reducing reliance on the automobile and assuring that the Planned transportation system supports patterns of travel and land use which will avoid or mitigate problems of air pollution, Traffic congestion and community livability;

H. Encouraging ride-share and flextime programs to help meet the projected increase in travel demand. The County will work with metro and tri-met to develop ride-share programs, flextime and other transportation demand strategies to achieve the ride-share goal given in the regional transportation plan; and

I. Implementing the preferred street standards chapter 29.500, administrative rule or the County Design and Construction Manual, including adherence to access control and intersection design guideline criteria~~,~~; and establishing a procedure for allowing ~~variances from that ordinance~~ deviation from the preferred standard only when a physical obstacle prevents construction to the preferred standard or when the appropriate local jurisdiction's

Transportation System Plan provides an alternate adopted standard. In all cases, roadways shall be constructed to standards within the County's allowable ranges for the appropriate classification.

J. Considering and allowing for implementation of regional street design elements including reduction of excessive standards (as shown in *Creating Livable Streets: Street Design ~~for 2040~~* (~~1997~~)) Guidelines (Second Edition, June 2002) when planning for improvements to facilities designated on Metro's Regional Street Design Map or on roadways in urban unincorporated areas. *[Added 1999, Ord. 926 § II]*

K. Improving local circulation by keeping through trips on arterial streets and minimizing local trip lengths by increasing street connectivity. *[Added 1999, Ord. 926 § II]*

L. Ensuring that on-street parking is provided in accordance with county street standards and coordinating with cities to implement Metro's regional 10 percent reduction goal.

M. Ensuring that additional right-of-way is dedicated at intersections that are currently signalized and that potentially may be signalized in order to comply with the Americans with Disabilities Act.

Excluding that portion of Multnomah County included in the Columbia River Gorge National Scenic Area, this Policy and the functional classification of trafficways map accompanying this Policy shall control over conflicting provisions of community plans or other pre-existing plans in determining the functional classification of trafficways. Trafficways located within the Columbia River Gorge National Scenic Area are subject to and superceded by provisions of the Columbia River Gorge Scenic Area Management Plan.

Strategies

A. TRAFFICWAYS

Adequate trafficways are essential for the efficient movement of goods and people. County trafficways should be designed and built to accommodate travel by a variety of travel modes, to provide access to abutting properties and as locations for utilities within the trafficway right-of-way. To develop an efficient and safe trafficway system, the following strategies should be pursued.

1. **Classification of Trafficways:** Trafficways should be classified into a functional network that is integrated with land uses and travel needs. The hierarchy of the functionally classified network should be based on trip types and length, traffic volume and travel modes, and access to adjacent land uses within travel corridors.

2. **System Efficiency:** An inventory of the trafficway system should be maintained to determine current and future deficiencies as the basis for a capital improvement program. The trafficway system should:
    a. be designed and operated to optimize travel capacities within acceptable levels of service, and

b. be consistent with land uses and transportation needs as determined by local and regional plans.

3. **Fostering Choice:** The trafficway system should be managed to provide opportunities for choices among available travel modes so that reliance on automobiles as single-occupant vehicles can be reduced, and so that total vehicle miles traveled as a measure of automobile use per capita can be reduced in the future, in accordance with the state Transportation Planning Rule and Policy 35: Public Transportation.

4. **Environmental and Social Values:** Development and operation of the County trafficway system should promote air quality consistent with federal standards, preserve open space and agricultural and forest lands consistent with local plans, protect scenic views, protect neighborhood cohesiveness and historic and cultural sites, and minimize the dislocation of residents and businesses resulting from County transportation projects.

5. **Safety:** Safety is a primary objective in the development and operation of the trafficway system through traffic signing and signalization, speed limits and speed control measures, road design and access control measures. Through the use of accepted design and traffic management principles and practices, traffic accidents and conflicts between pedestrians, bicyclists, equestrians and motorists can be minimized.

6. **Economics:** Work with the business community and regional and state agencies to assure efficient movement of goods and services in and through the County, including coordination of the trafficway system with intermodal facilities, and use of public right of way for power and telecommunication purposes.

7. **Freight movement:** County trafficways shall provide for the movement of freight on facilities designed and built to accommodate the types and frequency of freight trips, and which provide for convenient access to major highways, industrial areas and resource extraction sites. County should identify a trafficway network for the purpose of freight movement. Trafficways designated as National Highway System routes shall be classified as Principal Arterial roadways.

8. **Aesthetics:** Trafficways are an important visual element in the urban and rural environment. As public spaces, trafficways should facilitate the public's use of the right-of-way in a manner that provides an aesthetic benefit to the community through facility design, landscaping and their relationship to the natural and built environment.
9. **Street Connectivity:** Local street design impacts the effectiveness of the regional system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the regional network. Streets should be designed to keep through trips on arterial streets and provide local trips with alternative routes. *[Added 1999, Ord. 926 § II]*

B. TRANSPORTATION PLANNING

As part of Multnomah County's ongoing transportation planning program, the County should strive to anticipated and provide for the future travel needs of County residents, businesses and visitors.

1. **Compliance with Rules and Regulations:** Multnomah County should comply with existing and future state and federal legislation, and resulting rules and regulations, regarding environmental, energy, land use and transportation measures affecting the County trafficways system.

2. **Comprehensive Framework Plan Policy Revisions:** Multnomah County should revise CFP Policy 33 to include Policy 33d—Pedestrianways that incorporates all Policy references to the provision of pedestrian circulation, and a map of the County pedestrian network. CFP Policy 35—Public Transportation should be amended to incorporate all Policy references to the transit classification system and transportation demand management, and a map of the County transit system.

3. **Land Use Coordination:** The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses. The development of the transportation system and land uses and amendments to land use plans should be made in accordance with the executed Intergovernmental Agreements with the cities of Fairview, Gresham, and Troutdale to ensure consistency with the functions, capacities, and level of service of facilities identified in the Multnomah County transportation planning documents.

4. **System Optimization:** Transportation planning should strive to solve existing transportation problems, in response to community input, by maximizing the operational capacity of the current system using available management techniques, and providing new or expanded facilities only where necessary.

5. **Public Input:** Community input is vital to the transportation planning process and should be sought at key points in each planning process, including project development.

6. **Modal Plans:** Modal plans should be developed to establish truck, pedestrian and transit networks on the County trafficway system in coordination with regional and local transportation plans, and the appropriate CFP policies amended to incorporate the network maps. Modal networks plans for the County trafficways and bikeways should be maintained in coordination with regional and local transportation plans.
7. **Transportation Studies:** Transportation studies and corridor analyses should be conducted to determine transportation needs, identify and analyze problems and alternative solutions, giving the public and communities the opportunity to participate in and effect the decision process.

Specific corridor studies should include:

- ~~Mt. Hood Parkway: A through-route connection between Interstate-84 and US-26 in the East County area.~~
- Participation in the regional freight study to identify an alternative NHS truck route through the east Multnomah County area. The existing freight route along 181st/Burnside has land use conflicts with truck passage and substandard roadway conditions along Burnside in the Rockwood area. The 242nd Avenue Connector was identified as the alternate truck route in the Regional Transportation Plan. However, the project has been suspended because the transportation analysis completed for the Environmental Assessment found low demand for the connector in the short-term.

- 201st/202nd Avenues: Study of the capacity needs of a connection between Powell Boulevard. and Sandy Boulevard. in the vicinity of 201/202nd Avenue.

- Evacuation routes in regards to homeland security, including routes for transport of hazardous materials and evaluating any conflicts between evacuation routes and hazardous material routes. The County should continue to work through the inter-agency Intelligent Transportation Systems Subcommittee on Public Safety. to develop a map of emergency routes and coordinate with federal, state, and local agencies.

C. COMMUNITY DEVELOPMENT ORDINANCE

Measures to plan for, develop, and manage the County trafficway system should be codified in Multnomah County Code: Title II: Community Development.

a. **Street Standards:** Codes and Rules should be revised specifying characteristics, permitting requirements and operational measures necessary to implement the County transportation system identified in CFP Policies 33c, 33d, 34, and 35.

b. The Multnomah County Transportation Capital Improvement Plan and Program identifies and ranks by criteria of need, trafficway deficiencies and future capital needs, identifies future capital, and programs future transportation improvements based on a schedule of capital available for expenditure on the trafficway system.

D. STATE AND REGIONAL COORDINATION

~~Advise state and regional governments with regard to existing trafficways not under the County's jurisdiction.~~ The County should ~~alert~~ provide notice to the state ~~and~~(ODOT), regional (Metro) and affected local governments of required improvements, and should provide documentation as to public needs.

Appendix F
Sources

Functional Classification Descriptions and Definitions

Information on federal classifications is from the AASHTO "A Policy on Geometric Design of Highways and Streets," which incorporates information from the FHWA "Highway Functional Classification: Concepts, Criteria, and Procedures." The "1999 Oregon Highway Plan" (OHP) contains descriptions of the state highway classification system. Since the plan primarily deals with state highways, the classifications do not conform to the classifications of the other jurisdictions in the table. Therefore, the State classifications are not included in Appendix A table. The classifications are as follows:

	Connectivity	Speed	Volume	Other
Interstate Highways	Primary: major cities, regions of the state, and other states; secondary: regional trips within metropolitan areas	High	Continuous flow operation	Major freight routes
Statewide Highways	Primary: inter-urban and inter-regional mobility and connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highway; secondary: intra-urban and intra-regional trips	High	Continuous flow operation; in constrained and urban areas, interruptions to flow should be minimal	Local access may be a priority in Special Transportation Areas (STAs)
Regional Highways	Primary: regional centers, Statewide and Interstate Highways, or economic or activity centers of regional significance; secondary: serve land uses in the vicinity of the highways	Rural areas: high; urban and urbanizing areas: moderate to high	Continuous flow operation; in constrained and urban areas, interruptions to flow should be minimal	Local access may be a priority in STAs
District Highways	Primary: inter-urban and inter-regional mobility and connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highway; secondary: intra-urban and intra-regional trips	High	Continuous flow operation	Local access is a priority in STAs; local access is balanced with mobility in Urban Business Areas

Local Interest Roads	Function as local streets or arterials and serve little or no purpose for though traffic mobility; ODOT seeks to transfer these to local jurisdictions	Low to moderate		Local access is a priority inside STAs
Expressways (subset of Statewide, Regional, and District Highways) Definition: complete routes or segments of existing two-lane and multi-lane highways and planned multi-lane highways	Primary: interurban travel and connections to ports and major recreation areas with minimal interruptions; secondary: long distance intra-urban travel in metropolitan areas	Rural areas: high; urban areas: moderate to high	High	Private access is discouraged; public road connections are highly controlled; usually no pedestrian facilities; bikeways may be separated from the roadway

The City of Wood Village TSP uses Multnomah County's functional classifications. The Wood Village TSP provides a summary of the arterial, collector, and local categories and refers to Multnomah County's Design and Construction Manual. Therefore, Multnomah County and Wood Village share a column in the table. The language in the RTP and the TSPs was copied as directly as possible into the table, to preserve the definitions of the classifications.

Functional Classifications

The Transportation System Plans (TSPs) for each of the jurisdictions were used to compile the table of functional classifications by roadway (Table 2). Functional classifications in the table refer to those designated as "proposed" in the TSPs, as it is assumed that the TSPs are or will be adopted, and the proposed designations are the accepted designations.

Street Standards

Information on federal classification is from the AASHTO "A Policy on Geometric Design of Highways and Streets". Information was also taken from Metro's "2000 Regional Transportation Plan," and the cities' TSPs. Information from Troutdale and ODOT was not included. Arterials and collectors within the City of Troutdale are all County roads. ODOT's "Metric Highway Design Manual" contains design standards for rehabilitation and reconstruction of urban and rural highways (non-freeway). Since the manual primarily deals with state highways, the classifications do not conform to the classifications of the other jurisdictions in the table.