



## CITY of THE DALLES

313 COURT STREET  
THE DALLES, OREGON 97058

(541) 296-5481 ext. 1125  
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Community Development Dept.

### AGENDA CITY OF THE DALLES PLANNING COMMISSION

CITY HALL COUNCIL CHAMBERS  
313 COURT SREET  
THE DALLES, OREGON 97058  
*CONDUCTED IN A HANDICAP ACCESSIBLE MEETING ROOM*

**THURSDAY, JUNE 1, 2006**

**6:30 P.M.**

- I. **Call to Order**
- II. **Roll Call**
- III. **Approval of Agenda**
- IV. **Approval of Minutes: May 18, 2006**
- V. **Public Comment – Items not on the Agenda**
- VI. **Quasi-Judicial Public Hearings**

**[Please bring your information from the May 18<sup>th</sup> Hearing]**

- A. **Continued Hearing for Zoning Ordinance Amendment 71-06 and Comprehensive Plan Amendment 32-06.** WM3 and Northwest Aluminum Co. are making application to change the zoning and amend the Comprehensive Plan map of the City of The Dalles for a parcel located on the southwest end of River Road and further described as 2N 13E 28 tax lot 700, approximately 67.2 acres of a 247.9 acre parcel. This Zoning change will remove the Industrial zone and replace it with Commercial Light Industrial. The change in authorized uses is from industrial to commercial and light industrial. City Ordinance 98-1222 includes a comprehensive list of specific use types. Review criteria for this zone are contained in City Ordinance 98-1222.
- B. **Variance No. 108-06, Adjustment No. 06-003, Minor Partition No. 246-06, Property Line Adjustment No. 150-06, Site Plan Review No. 335-06 of Kase Limmeroth** to build three townhouse units on two lots with a total width of 75 feet. The variance is requested to allow lots less than 28 feet in width, the adjustment is requested for a reduction in the front yard setback, the minor partition is to create three lots out of two, the property line adjustment is to move an existing property line, and the site plan review is required by the Land Use and Development Ordinance (LUDO) when single family attached dwellings are proposed in the RH zone.

**VII. Resolution**

**VIII. Commissioner Comments/Questions**

**IX. Staff Comments**

**X. Next meeting date: June 15, 2006**

**XI. Adjournment**



## **CITY OF THE DALLES PLANNING COMMISSION MINUTES**

**Thursday, May 18, 2006**

City Hall Council Chambers

313 Court Streets

The Dalles, OR 97058

*Conducted in a handicap accessible room*

### **CALL TO ORDER:**

Chair Lavier called the meeting of The Dalles Planning Commission to order at 6:30 P.M.

### **ROLL CALL:**

**Present:** Bruce Lavier, Ted Bryant, Dean Wilcox, Derek Hiser, and Jo Ann Wixon

**Absent:** Ron Ahlberg and Mark Poppoff

**Staff:** Gene Parker, City Attorney, Dan Durow, Community Development Director, Dale McCabe, City Engineer, Dick Gassman, Senior Planner; and Denise Ball, Admin. Secretary

**AGENDA:** Commissioner Bryant moved to approve the agenda as submitted and Commissioner Wixon seconded. The motion carried unanimously, Ahlberg and Poppoff absent.

**MINUTES:** There were no corrections to the minutes of April 20, 2006. Commissioner Wixon moved to approve the minutes and Commission Bryant seconded. The motion carried unanimously, Ahlberg and Poppoff absent.

**PUBLIC COMMENT:** None

**PUBLIC HEARING – QUASI JUDICIAL:** **Zoning Ordinance Amendment 71-06 and Comprehensive Plan Amendment 32-06.** WM3 and Northwest Aluminum Co. are making application to change the zoning and amend the Comprehensive Plan map of the City of The Dalles for a parcel located on the southwest end of River Road and further described as 2N 13E 28 tax lot 700, approximately 67.2 acres of a 247.9 acre parcel. This Zoning change will remove the Industrial zone and replace it with Commercial Light Industrial. The change in authorized uses is from industrial to commercial and light industrial. City Ordinance 98-1222 includes a comprehensive list of specific use types. Review criteria for this zone are contained in City Ordinance 98-1222.

Chair Lavier read the rules for conducting a public hearing. He asked the Commissioners if they had any bias, ex-parte contact, or conflict of interest to declare. There was none and there were no challenges from the audience.

Chair Lavier declared the public hearing open and asked Senior Planner Gassman for the Staff Report.

Senior Planner Gassman explained to the Commission that the Department of Land Conservation and Development (DLCD) and Oregon Department of Transportation (ODOT) had voiced concerns with the application.

One concern is the traffic impact on the nearby interchange. The applicant has not submitted a development proposal, which would trigger a traffic study for the City, but both DLCD and ODOT are requesting a traffic study. The applicant did have a traffic study completed this week using a shopping center development, which is a worst case scenario.

A second concern is available commercial and industrial land. Gassman explained the analysis of available land. There is approximately 60 acres of available commercial land that is far below the 150 acres proposed by the Comprehensive Plan in 1994. The Plan referenced the underdeveloped land along west second as probable acreage to be converted to commercial use. There is underdeveloped and undeveloped industrial land totaling approximately 500 acres, which is well over the 170 acres needed in the Comprehensive Plan for the 20 year land supply. There is a severe shortage of commercial land and that is the main reason Staff is supporting this zone and comprehensive plan change. Gassman explained that access would primarily take place along River Road with limited access along W. 2<sup>nd</sup> Street.

The Port indicated by letter that they do not feel this property would be viable for an industrial development and is better suited to a commercial application.

Bryant asked why the change to Commercial Light Industrial rather than Commercial General. Gassman pointed out that the properties along W. 2<sup>nd</sup> Street are zoned Commercial Light Industrial and this is a compatible zone change request.

Bryant asked if the sewer would need to be pumped. City Engineer McCabe said that degree of investigation into required infrastructure has not been undertaken. Those questions will be answered when an actual development is proposed.

**Proponents:** Dan Meader, Land Use Planner, Tenneson Engineering, 409 Lincoln spoke in favor of the application. Meader introduced Bill Maley and Mark McCavic as WM3, the applicant. Meader informed the Commission that DLCD had requested that the record be kept open, which means there will be no recommendation made tonight. Mr. Meader referred to his report and the Land Use Needs and Location Analysis (LUNALA) by RARE Planner Erik Rundell. The available data and studies support the zone change from industrial to commercial. DLCD and ODOT were not specifically opposed to the zone change but have additional informational requirements before giving complete support to the application. Mr. Meader told Commissioners that he chose the Commercial Light Industrial zone because he felt it would give the applicant the most opportunity for development. The property can be developed, at some expense to the applicant, and is suitable for a variety of businesses.

Chair Lavier asked why the Port was not interested in the property. Mr. Meader said the topography, power lines, and wetland issues create a situation where you have to dodge around obstacles. Also, the Port felt the location was better suited to commercial uses.

Commissioner Bryant commented that Hood River is busy running industry out of their City and The Dalles has welcomed them. Bryant asked if the City should not keep all industrial zoned lands to

accommodate more businesses that may be run out of Hood River. Mr. Meader said the current supply of industrial lands is over 500 acres (LUNALA page 9, figure 3). This land is better suited to commercial development due to the location.

Commissioner Wilcox asked if the applicant had considered buying the adjoining NW Aluminum property with the huge mound of waste on it. Mr. Meader said the property is not for sale at this time. Commissioners Lavier and Bryant pointed out it is a superfund site. Commissioner Wilcox said NW Aluminum needs to move the mound of sludge.

Mark McCavic, 5277 Cherry Heights Road, The Dalles, and one of the applicants, spoke in favor of the proposed zone change. The Commercial Light Industrial zone will give the applicant several options for development. Installing the infrastructure will be extremely expensive and finding the right business for the property will be very important. Mr. McCavic did supply a traffic study based upon the worst case scenario, a shopping center. Copies were handed out to the Commission and Staff.

Galen May, N.W. Aluminum, Environmental Manager, 3313 W. 2<sup>nd</sup>, informed the Commission that Lockheed Martin owns the property with the mound of sludge on it as well as the landfill on the other side. This ownership is in perpetuity. One of the sites is a CIRCLA cleanup site the other is a RCRA cleanup site. The costs right now for clean up is over \$100 million dollars. The sites are stable and no leachate is coming out. New bio-treatments are being used also. Until the cost is more affordable, the landfills will remain.

**Opponent Testimony:** Leonard Berry, 931 Verdant, The Dalles, submitted a letter in opposition on May 11, 2006. A copy was presented to the Commission, Staff, and the applicant.

**Rebuttal Testimony: None**

**Neutral Testimony:** Oregon Department of Transportation, Jim Bryant, wanted it made clear that ODOT did not ask for the record to remain open, DLCD did. The main concern of ODOT is a commercial development adjacent to a freeway interchange. They are prepared to work with The City and the applicant for an acceptable traffic flow.

Commissioner Bryant asked Senior Planner Gassman if DLCD has a copy of Erik Rundell's LUNALA. Gassman said no. He explained about a court decision that ruled a City must adopt studies if it is using them to make land use decisions.

Chair Lavier asked if the City had a preference for the date to keep the record open. Senior Planner Gassman suggested Friday, May 26<sup>th</sup> and the hearing will be continued until Thursday, June 1<sup>st</sup> at 6:30 pm.

**Deliberation:** Commissioner Wilcox moved to keep the record open until Friday, May 26<sup>th</sup> until 5 p.m. The hearing will continue on Thursday, June 1, 2006 at 6:30 p.m. Commissioner Bryant seconded the motion and it carried unanimously, Poppoff and Ahlberg absent.

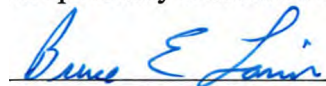
**SIGNIFICANT TREES:** Senior Planner Gassman asked the Commissioners to indicate if they would like the significant tree topic to be on the list of potential LUDO revisions. After a brief discussion the Commission decided to leave significant trees off the list of possible revisions.

**COMMISSIONER COMMENTS:** Commissioner Hiser asked why the college was not invited to speak at tonight's meeting. Senior Planner Gassman explained that the college has submitted an application for cut and fill. This is being processed as an administrative application. If there should be an appeal of the decision, the Planning Commission would hear the appeal so it would not be appropriate to discuss the application or situation.

**NEXT MEETING:** The next meeting is June 1, 2006. The Urban Growth Boundary Amendment Subcommittee's will have a workshop on May 25, 2006.

**ADJOURNMENT:** The regular Planning Commission meeting was adjourned at 7:40 p.m.

Respectfully submitted by Denise Ball, Secretary.



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Bruce Lavier, Planning Commission Chair



# Oregon

Theodore R. Kulongoski, Governor

## Department of Transportation

Senior Planner

Program and Planning

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Bend, OR 97701

Telephone (541) 388-6437

FAX (541) 388-6361

[james.r.bryant@odot.state.or.us](mailto:james.r.bryant@odot.state.or.us)

May 16, 2006

Mr. Dick Gassman  
Senior Planner  
City of The Dalles  
313 Court St.  
The Dalles, OR 97058

SUBJECT: WM3 Comprehensive Plan Amendment #32-06/Zone Change Amendment  
#71-06

Dear Dick:

The Oregon Department of Transportation (ODOT) appreciates the opportunity to comment on the proposed project. This project is of interest to ODOT because of its potential impacts to the state transportation system, in particular the Chenoweth Interchange ramps.

The proposed land use action would allow a significant intensification of the property. The proposed amendment would allow all retail uses including shopping centers. Trip generation rates from the Institute of Transportation Engineers (ITE) for shopping centers (ITE code 820) identify an average of 43 trips per 1000 square feet of leasable area. For the purpose of determining potential impacts in the absence of a traffic study, ODOT assumes that 20 percent of the parcel area will be leasable space and 80 percent of the property will be used for parking, loading, circulation and landscaping. Twenty percent of 67 acres nets 584,000 square feet of leasable area and would generate 25,077 daily trips. Fifteen percent of 67 acres would equate to 438,000 square feet of leasable area and 18,808 daily trips. For comparison purposes, the Mt. View Mall in Bend is 41 acres and has 24 percent (440,000 square feet) of the property in leasable area.

The traffic generated by commercial uses is far greater than that generated by industrial uses. The typical light industrial use (ITE code 110) would generate 3,471 trips for a 67-acre parcel. A 67-acre industrial park (ITE code 130) would generate 4,221 trips.


While we understand from the applicant that a transportation impact analysis (TIA) is being prepared for the proposed land use amendment, it must be completed prior to a determination of consistency with OAR 660-12-060. OAR 660 and The Dalles' Land Use Development Code (LUDO) require a finding of adequate transportation facilities at the time of the Comprehensive Plan and Zone Amendment. A TIA is needed to assess the project impacts and to make the necessary findings of sufficiency. Absent a TIA, the

proposed land use action is not consistent with Goal 2 (a) compliance with statewide land use goals and related administrative rules; or (d) adequate public facilities, services and transportation networks are in place, or are planned to be provided with the proposed change. Similarly, the approval criteria for a zone change, LUDO Section 3.100.030, require a finding that the site will be adequately served by streets for the type and volume of traffic generated by uses that may be permitted in the new zone.

ODOT is committed to working with the applicant and the City to minimize any delay to the project and looks forward to a successful project and a well functioning transportation system that serves this project and future developments in The Dalles.

If you have any questions about these comments or require further information, please feel free to contact me at (541) 388-6437 or at [james.r.bryant@odot.state.or.us](mailto:james.r.bryant@odot.state.or.us).

Sincerely,



James R. Bryant  
ODOT Region 4 Planner

cc: Mark McCavic, Applicant (via E-mail)  
Brad DeHart, ODOT District 9 (via E-Mail)  
Rod Cathcart, ODOT Region 4 Traffic Analyst

## Richard Gassman

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**From:** Steven Santos [santoss@lcd.state.or.us]  
**Sent:** Tuesday, May 16, 2006 3:27 PM  
**To:** richard.gassman@ci.the-dalles.or.us  
**Cc:** Matthew Crall; Mark RADABAUGH  
**Subject:** The Dalles PAPA 003-06

Dick:

I received your fax today of the letter from the property owner's consultant, Tenneson Engineering. Thanks for forwarding it to the department. It was helpful to see this as well as the letter of support from the Port of The Dalles.

I would like to take a moment to summarize our phone conversation from last week. In your staff report and the letter from the owner's consultant, it has been suggested that the department recommends waiting until The Dalles completes a UGB expansion before making a decision on this proposal. For clarification, our May 3, 2006 letter recommends completing and adopting the Economic Opportunities Analysis currently underway. We did not recommend waiting until a UGB expansion is completed.

One of the reasons for this recommendation is because of a recent court of appeals case (1000 Friends of Oregon v. City of Dundee, 203 Or App 207 (2005)). It is our understanding that this court decision requires local adoption of an Economic Opportunities Analysis as part of the comprehensive plan in order for a community to base land use decisions upon it. The staff report and the consultant's letter cite data that has not been adopted by The Dalles to establish need.

The department is aware through conversations with you that the subject property is currently in escrow and that the sale is contingent on commercial uses being allowed. We are sensitive to the reality that the timing of the market is sometimes not synchronized to the timing of planning studies.

The department would find it very helpful if the staff analysis and findings included details of the unsuitability of the site for its current designation, such as those raised by the Port of the Dalles and the applicant regarding topography and infrastructure cost. Also, since it has been suggested by the applicant and the local staff report that a mix of light industrial and commercial uses is intended, it would be helpful if it were clearer how that mix of uses is going to be achieved, rather than the site begin developed for commercial uses exclusively.

If The Dalles can show that the site is unsuitable for its current designation and will meet industrial AND commercial demand, it may be able to make findings that the proposal is consistent with its current adopted comprehensive plan.

My comments above relate only to the Goal 9 (Economic Development) issues raised in the department's May 3, 2006 letter. Matt Crall from the department may follow-up with you by phone or email on transportation issues.

If you have any questions about this email, please don't hesitate to contact me.

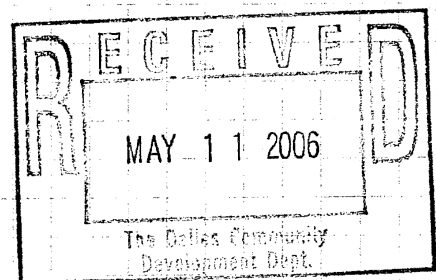
Steven Santos  
Economic Development Planning Specialist  
Department of Land Conservation & Development  
635 Capitol St. NE, Suite 150  
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(503) 378-5518 (fax)  
steven.santos@state.or.us

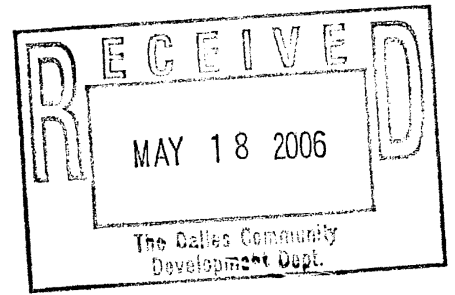
Objection to change  
Martin Marietta property  
To light industrial use

Because of the massive  
amounts of arsenic and cyanide  
and until it's cleaned up  
properly, the Health + Welfare  
of the Public would be in  
danger.

Leonard Berry  
931 Verdant  
The Dalles Or.

Use eminent Domain on  
Lockheed Martin.





**Proposed Shopping Center  
Traffic Impact Study  
City of The Dalles, Oregon**

Prepared by:  
Jon S. Meusch, PE  
NWS Traffic Engineering

Prepared for:  
Columbia River Electric  
City of The Dalles, OR

05/14/06

## PROJECT DESCRIPTION

This traffic study was performed to determine the traffic impacts on the Chenoweth interchange associated with the proposed shopping center development in the Dalles, Oregon. The property is located within the city limits, on the northern boundary, on the west side of River Rd. The site is owned by Northwest Aluminum Co. and is zoned for industrial land use. The owner proposes to re-zone the area for commercial land use and ultimately construct a 520,000 square foot shopping center on this lot. The shopping center will provide an on-site parking facility sufficient to serve its own parking demands.

The location is shown on the vicinity map (Figure 1, Appendix A). The area of influence for the study was defined by Oregon Department of Transportation (ODOT) to include the projected increase in traffic volumes at the Chenoweth Interchange (I-84, Exit 82). A map of the influence area of the project is shown in Figure 2 of Appendix A.

The two intersections in the influence area, with existing and future traffic control conditions for analysis, are listed below in Table 1.

**Table 1. Intersections for Analysis**

Intersection	Traffic Control - Existing	Traffic Control - Proposed
I-84 EB Ramp and River Rd	Unsignalized – 1-Way Stop controlled	Signalized, with major alterations
I-84 WB Ramp and River Rd	Unsignalized – 1-Way Stop controlled	Signalized, with major alterations

A traffic analysis was performed using background and total traffic for a build-out year of 2007 and a horizon year of 2027. Level of Service (LOS) analyses were conducted for both intersections, using a worst case scenario which is PM peak along with Saturday site generated trips. The results are listed in Tables 3a and 3b.

## CHENOWETH INTERCHANGE

The majority of site trips will pass through one or both intersections on the interchange. According to ODOT, the interchange was constructed to serve existing and future industrial traffic in the project area.

## VEHICLE TRIP GENERATION

The planned use for the development is for a shopping center. It is assumed that construction would be scheduled to be completed in 2007.

Vehicle trip generation rates were calculated based on historical data contained in the *ITE Trip Generation* manual (6<sup>th</sup> Edition, 1997). Trips for the site were developed from the manual using ITE Land Use Code 820, Shopping Center. For this study, the Saturday Peak Hour Generator was used since the majority of traffic into a shopping center is on Saturday as stated by ITE. A summary of the trip generation characteristics for the proposed developments is shown in Table 2.

**Table 2. Summary of Projected Trips for General Light Industrial (Land Use Code 110)**

ITE Land Use	Gross Leasable Square Footage	Weekend		
		Peak Hour of Adjacent Street Traffic		
		Total	Enter	Exit
Shopping Center (Code 820)	520,000	2551	1327	1224

## **VEHICLE TRIP DISTRIBUTION & ASSIGNMENT**

The objective of this study is to determine if the Chenoweth overpass has the capacity to support this development and background traffic. The only intersections of interest for this particular study are River Rd. & I-84EB, and River Rd. & I-84WB. Gravity models were used to determine the trip distribution, since empirical data from existing malls was unavailable. An assumption was made that the main access point would be directly adjacent to River Trail Way onto River Road.

Two gravity models were developed for this study (see Appendix D). Both were based on the likelihood that the number of trips between two zones is proportional to the population of each zone and inversely proportional to the distance between the two zones. The first model shows the number of trips generated from each of the surrounding counties and the route that will most likely be used. Note, it is assumed that all traffic from surrounding areas outside the city will use the Chenoweth interchange for access to the site. The second shows trips generated from within the City of The Dalles.

Figure 4 shows the resulting trip distribution percentages taking into account both models. The product of the trip percentage and the trips generated for ingress and egress gives the site generated trips as seen in Figure 5.

## **TRAFFIC FLOW AND CAPACITY ANALYSIS RESULTS**

Level of Service (LOS) analyses were completed for the study intersections during the Saturday peak hour periods, with the assumption that background PM peak traffic is equivalent to Saturday peak hour traffic. This assumption was made as a worst case scenario since the schedule of this project did not allow time for a traffic count on the weekend, and since weekday traffic counts were available. The following scenarios were analyzed:

- 2006 Existing Traffic
- 2007 Background Traffic
- 2007 Total Traffic
- 2027 Background Traffic
- 2027 Total Traffic

The existing traffic volumes are based on recent traffic counts of the study intersections, collected in November and December 2005 (Appendix C). Project 02 is a development in the vicinity which will be finished in 2007 as well. With this in mind site generated trips from this development (Figure 11) were included in the background traffic volumes for this

study. The total traffic in 2007 was obtained by adding background traffic to the site-generated traffic. The percentage of truck traffic in the study area will be considerably reduced with the addition of the site generated trips from the shopping center. This was considered in the analyses by reducing truck percentage to 3 percent.

The 2007 background traffic volumes were increased using a 1.5% annual growth rate to obtain the projected background traffic volumes for 2027 (Figure 9). The growth rate was derived from the Transportation System Plan (TSP), updated June, 2005 (draft). The TSP suggests that the overall population growth will be about 1.1% annually, but that growth in industrial employment in the industrial zone west of River Rd will be about 2%. An average of these rates seems appropriate, given that the primary study intersections are on the boundary of the industrial zone.

Future Volume Tables were also used to double check the growth rate. The same growth rate of 1.5% was derived from applying the formulas to the data from the Future Volume Table, supplied by ODOT, for highway 100 Mile Post 72.37.

In this study no growth rate was applied to the site generated trips since there is a fixed amount of leasable space in the development. The total 2027 traffic was derived from the summation of the 2027 background traffic and total site generated trips (Figure 10).

Traffic volume maps were prepared showing the traffic volume data and turning movements for the weekday Saturday peak hour conditions used in the capacity analysis. Appendix A includes a series of volume maps (Figures 5 - 10) depicting the peak hour traffic volumes and scenarios applied in the analysis. Appendix B of the report contains a detailed capacity analysis output in *Highway Capacity Manual* (HCM) format obtained from Synchro (Version 6) software. General lane configurations for the study intersections are shown in Figure 3 of Appendix A. Note that the information presented in the table below represent the LOS and delay associated with the worst minor street approach for two-way stop controlled intersections

**Table 3a. LOS Results Existing Two-Way Stop Control**

Traffic Scenario	I-84 EB			I-84 WB		
	LOS	Delay (sec)	v/c Ratio	LOS	Delay (sec)	v/c Ratio
Existing (2006)	B	10.0	0.17	B	12.6	0.17
Background (2007)	B	10.4	0.18	B	13.5	0.20
Total Traffic at Build-out (2007)	F	6172	14.28	F	1154	3.46
Background (2027)	B	11.5	0.26	C	18.3	0.34
Total Traffic at Horizon (2027)	F	8748	19.9	F	2182	5.70

As you can see from Tables 3a the traffic generated by the proposed site overwhelms the existing intersections. The observed increase in delay is from the inability of finding an allowable gap to turn onto River Road from the Interstate ramps. This is due to the increase in traffic volume from the site generated trips, and the lack of stop control for thru traffic on River Road. With this in mind an analysis was performed to show the effect of signaling the intersections.

With the assumption that the interchange is able to be signalized LOS analyses were performed for two different signaling methods. The first, noted as "2 controllers", uses a

separate controller for each of the two intersections, which are coordinated. The second, noted as “Diamond”, uses a configuration where one controller is used to control and coordinate both intersections. Table 3b shows the results for both configurations at the build out and horizon dates. Note that the information represents the LOS and delay for the overall intersection, and the lane configurations were unchanged.

**Table 3b. LOS Results Signalized**

Traffic Scenario	I-84 EB			I-84 WB		
	INT. LOS	Delay (sec)	v/c Ratio	INT. LOS	Delay (sec)	v/c Ratio
Total Traffic (2007) 2 controllers	D	42.8	1.11	E	58.1	1.08
Total Traffic (2007) Diamond	F	92.7	0.89	F	137.0	1.05
Total Traffic (2027) 2 controllers	D	62.0	1.22	E	77.5	1.19
Total Traffic (2027) Diamond	F	130.7	0.94	F	151.8	1.12

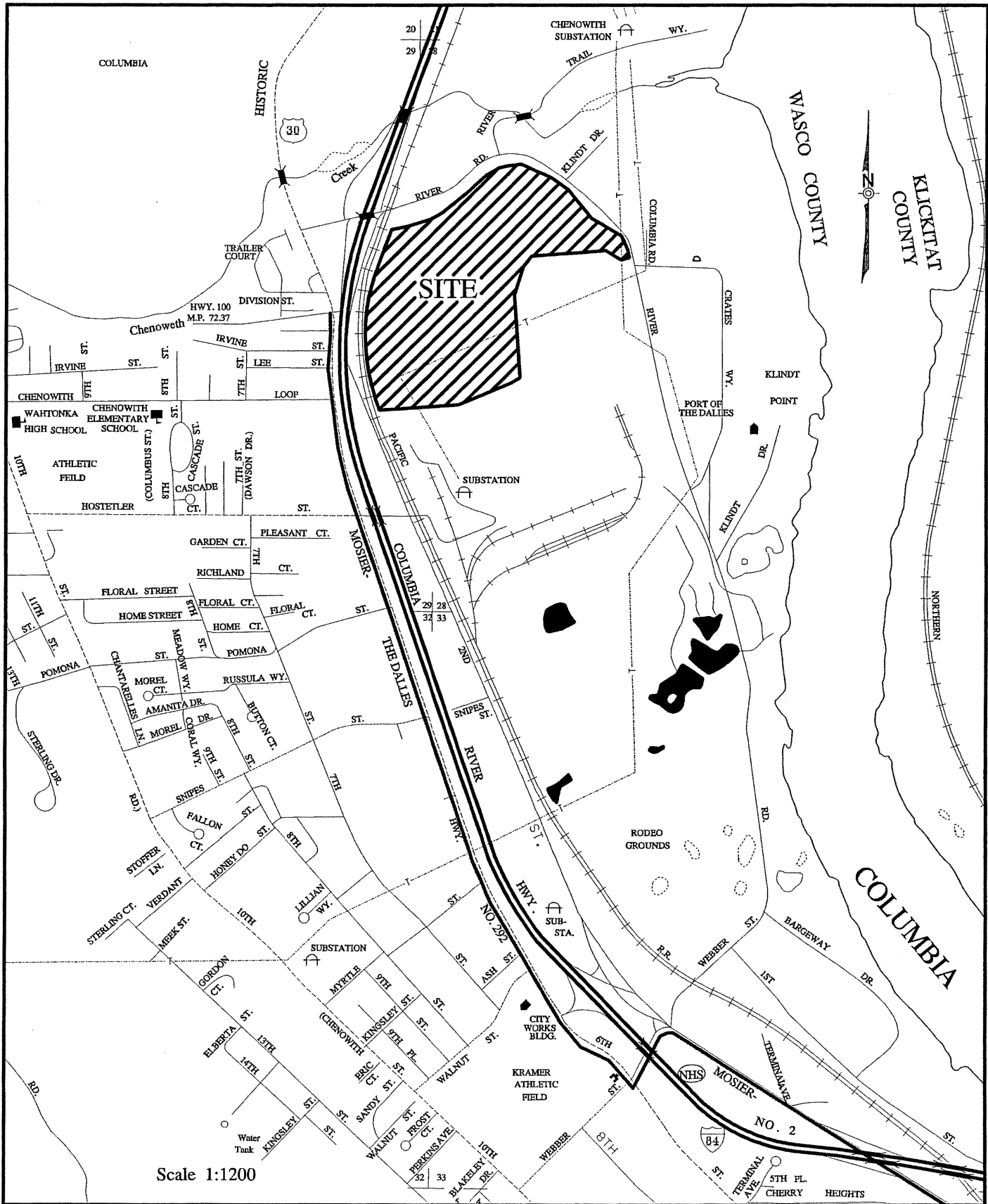
As you can see from Table 3b the signalization of the intersection significantly improves the amount of delay and the configuration of 2 coordinated controllers achieves an operative LOS. Other possible improvements such as adding lanes and increasing turning bay lengths may further improve the LOS, although that is beyond the scope of this traffic study.

## SUMMARY AND RECOMMENDATIONS

This study was performed with the exclusive purpose of the determining if the Chenoweth Interchange has the capacity to provide the needs demanded by the introduction of a shopping center in the immediate area. The analysis concludes that capacities of the existing stop controlled intersections are overwhelmed by the site generated traffic. Assuming that signalization is feasible the delay and LOS can be greatly improved by installing coordinated signals at each intersection.

In order to achieve a LOS of C or better significant modifications to the interchange will be needed. These modifications may include widening the structure and ramps to add lanes, relocating the ramps to create space between the intersections, and lengthening the turning bays.

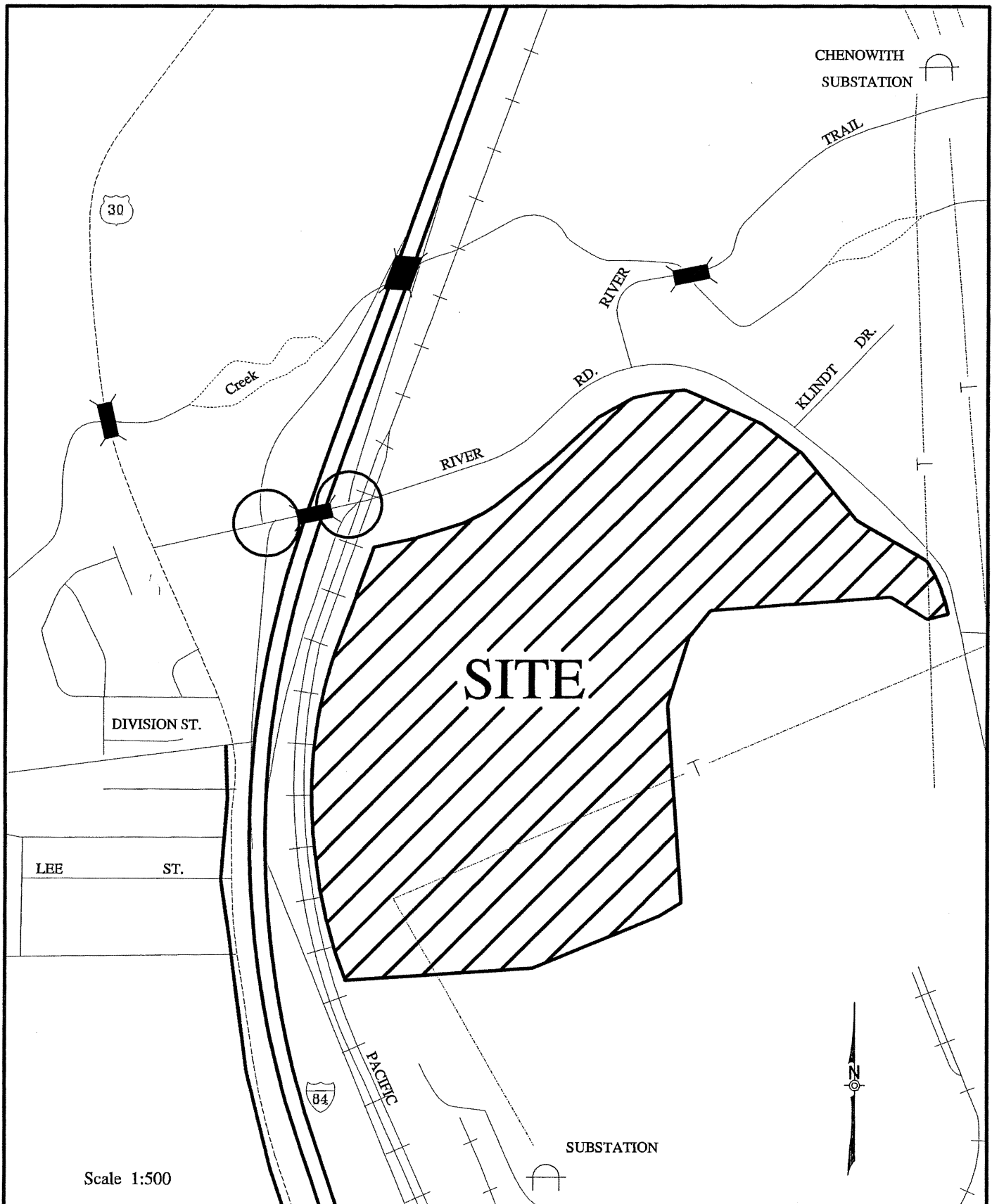
**Appendix A**  
**Figures**



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

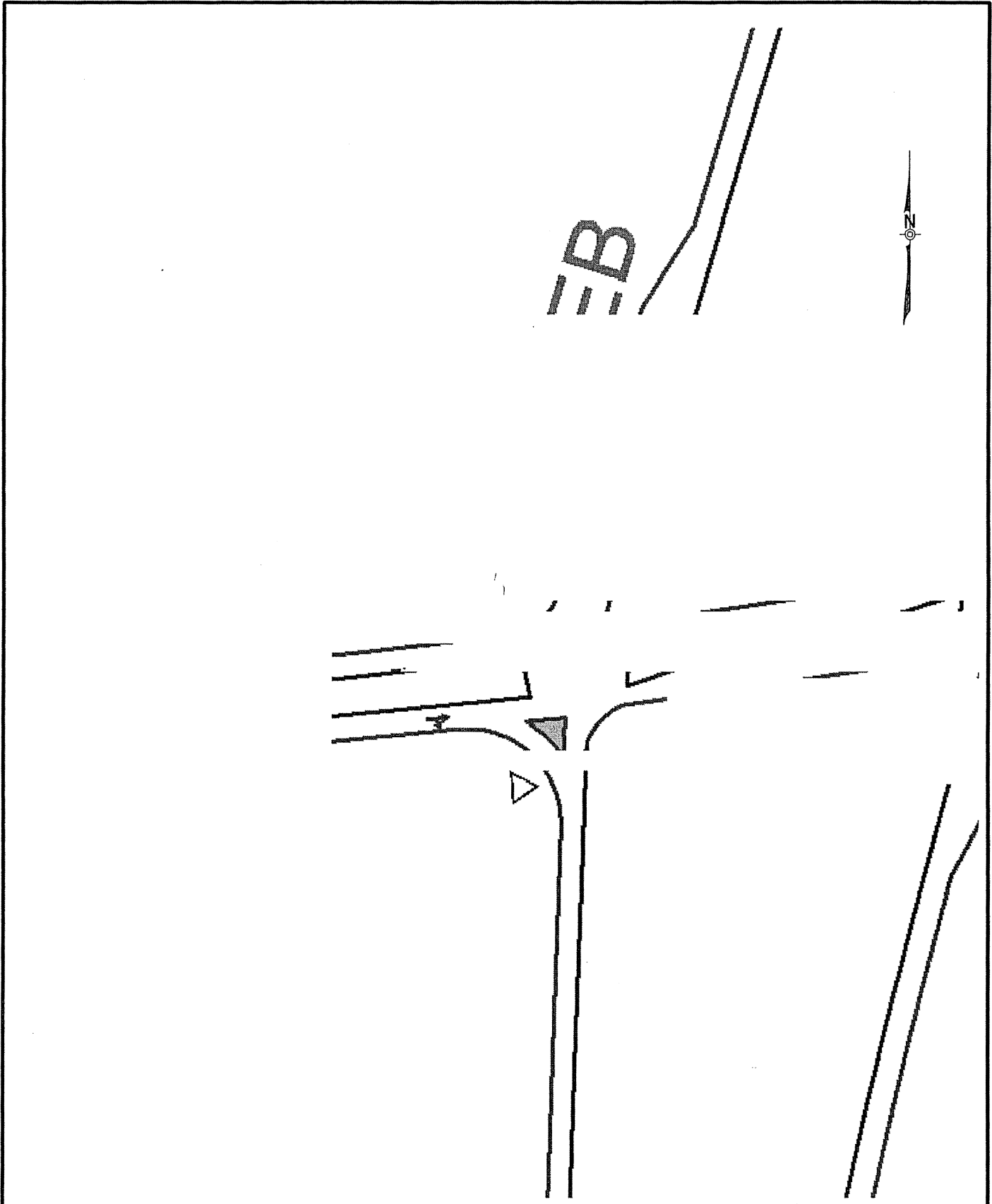
FIGURE 1  
VICINITY MAP



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

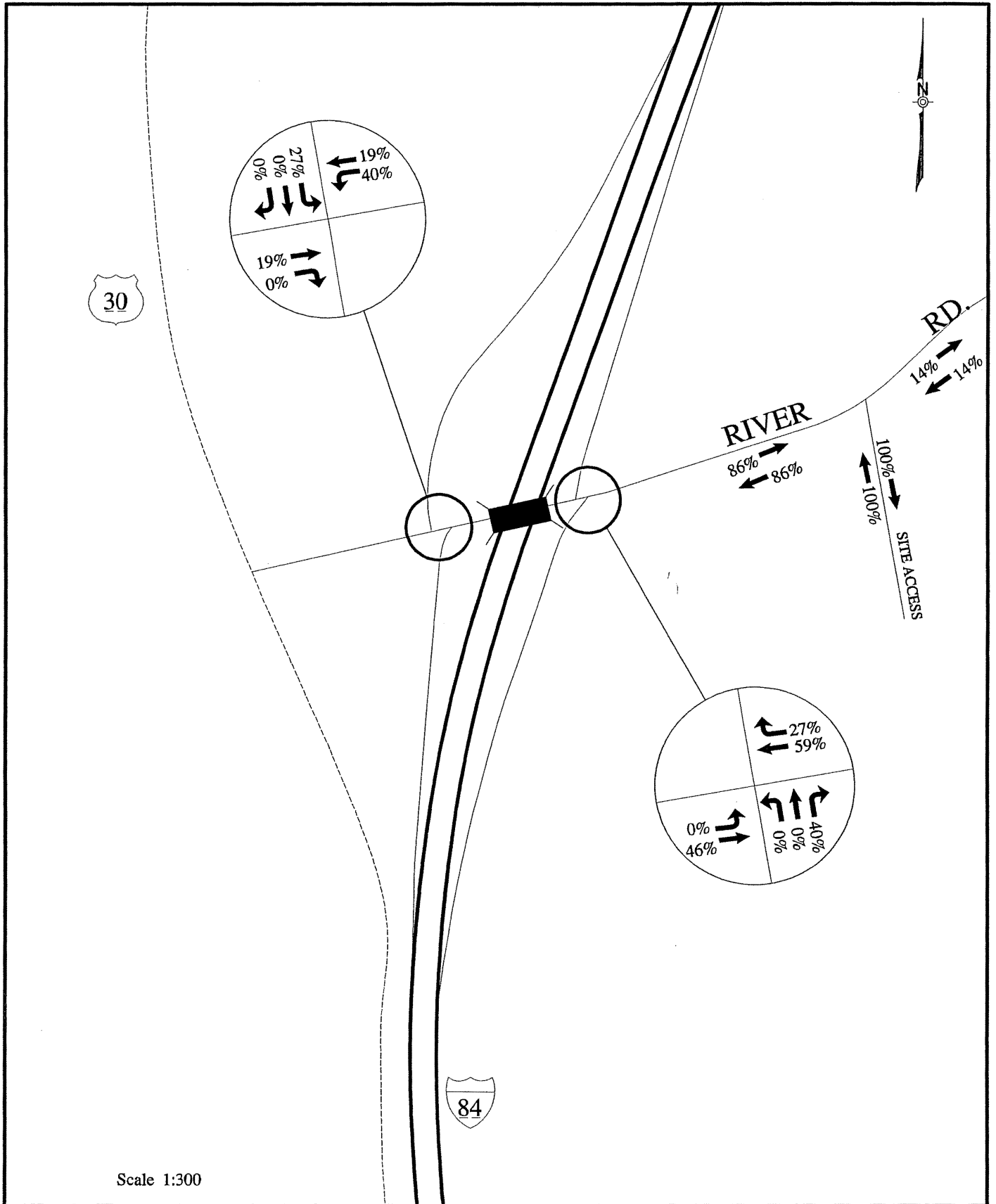
FIGURE 2  
AREA OF INFLUENCE



**NWS** TRAFFIC  
ENGINEERING

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

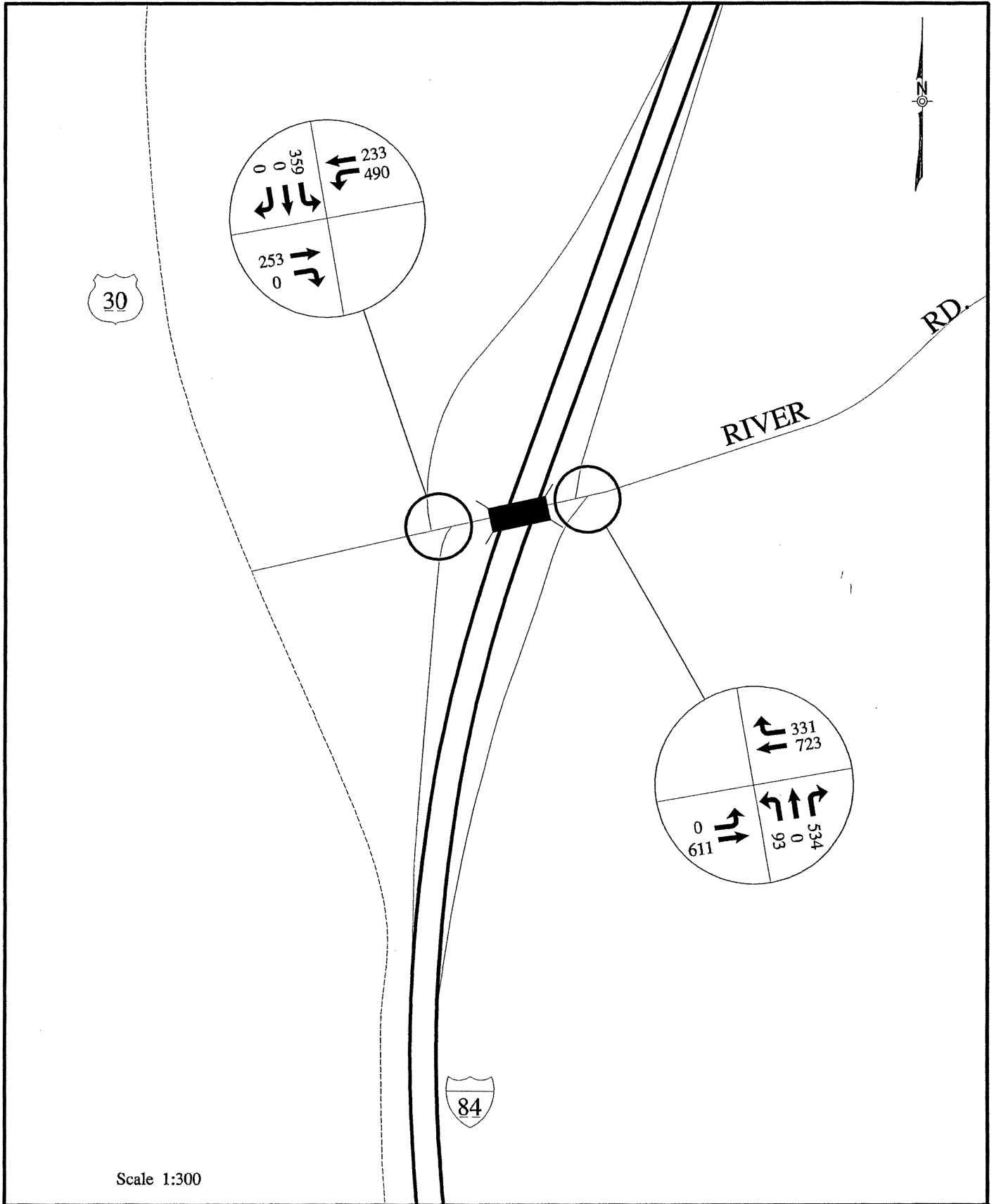
FIGURE 3  
EXISTING CONDITION  
I-84 WESTBOUND



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

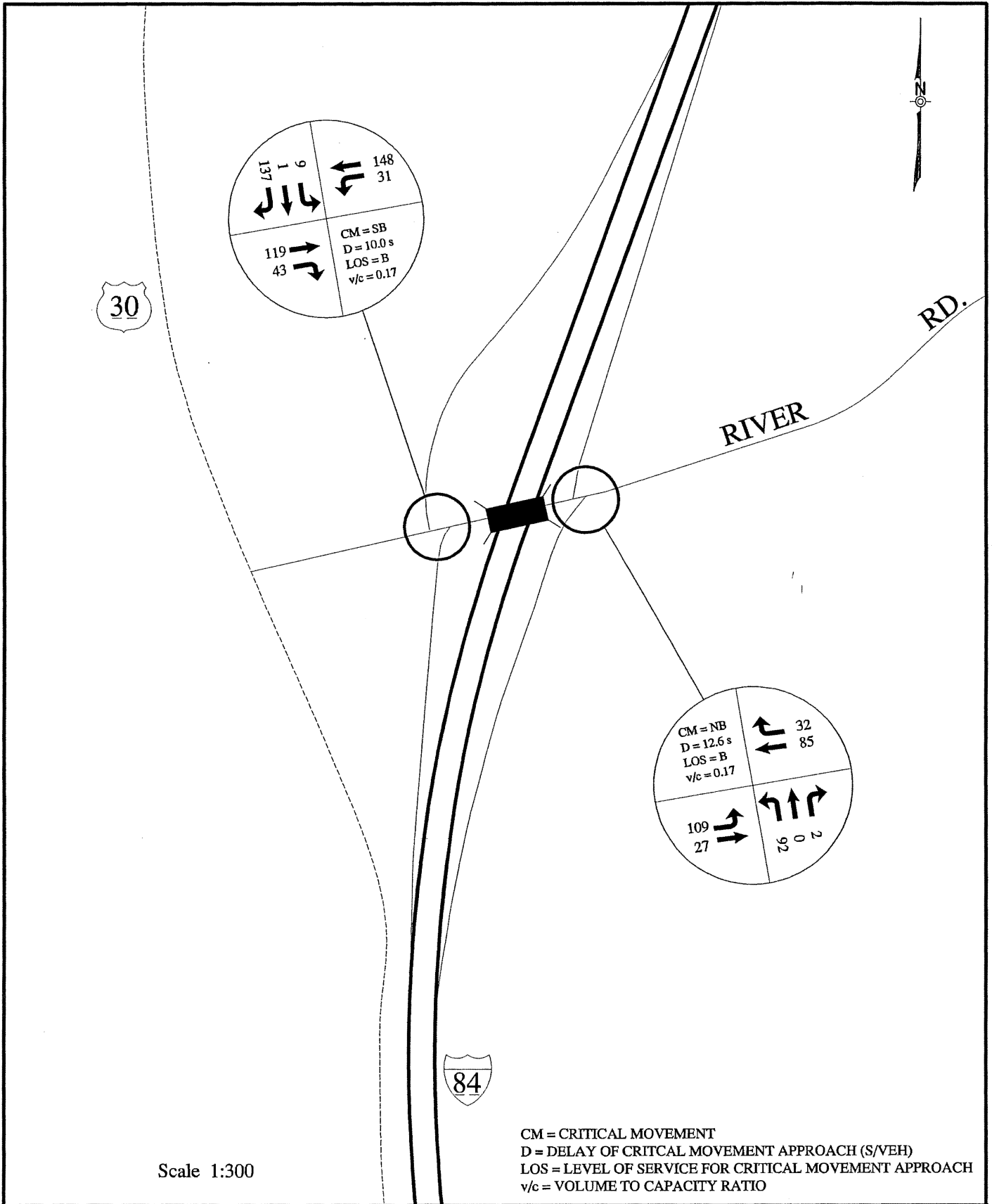
**FIGURE 4  
SITE TRIP DISTRIBUTION  
PERCENTAGES**



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

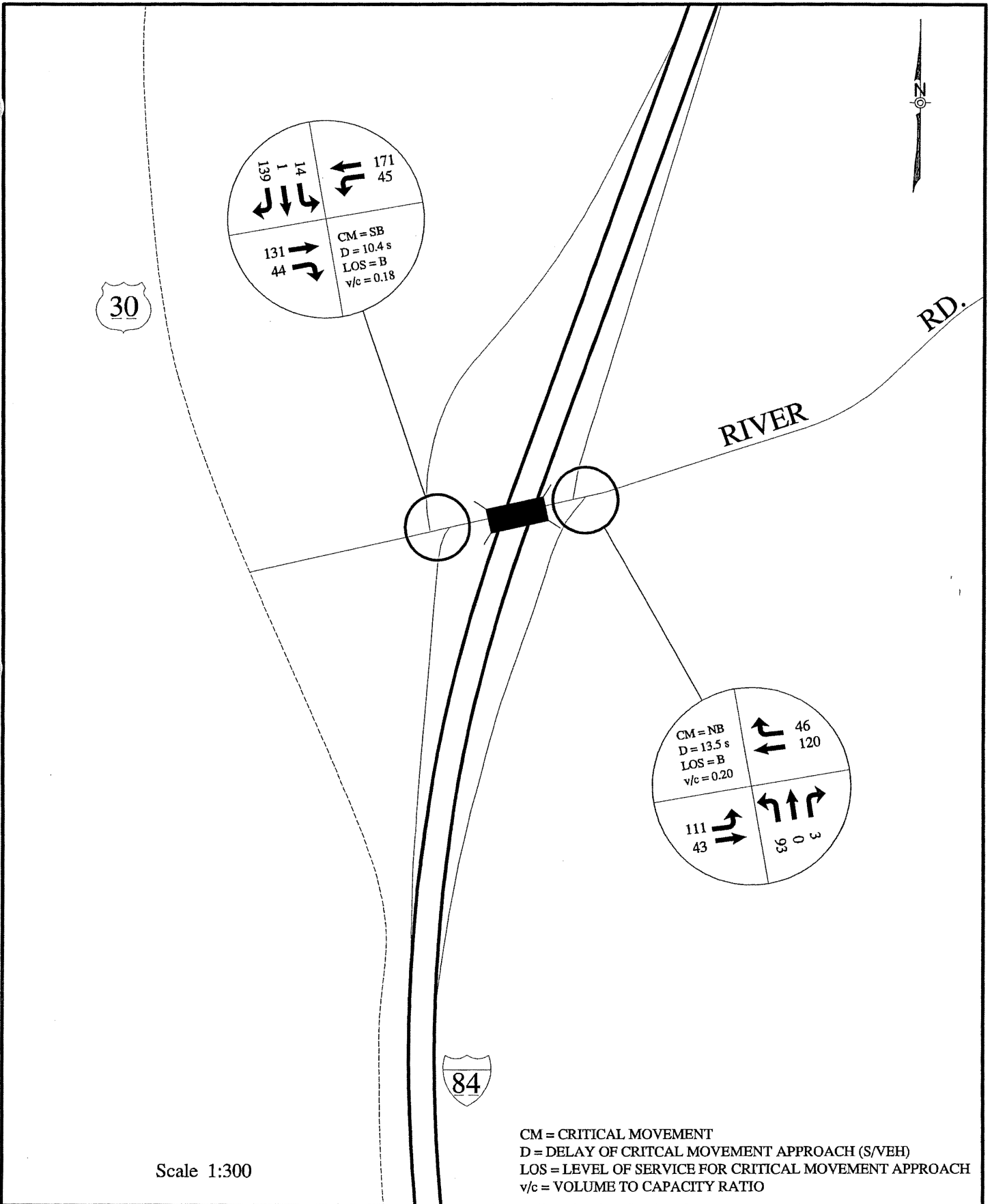
FIGURE 5  
SITE GENERATED TRIPS  
SATURDAY PEAK



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

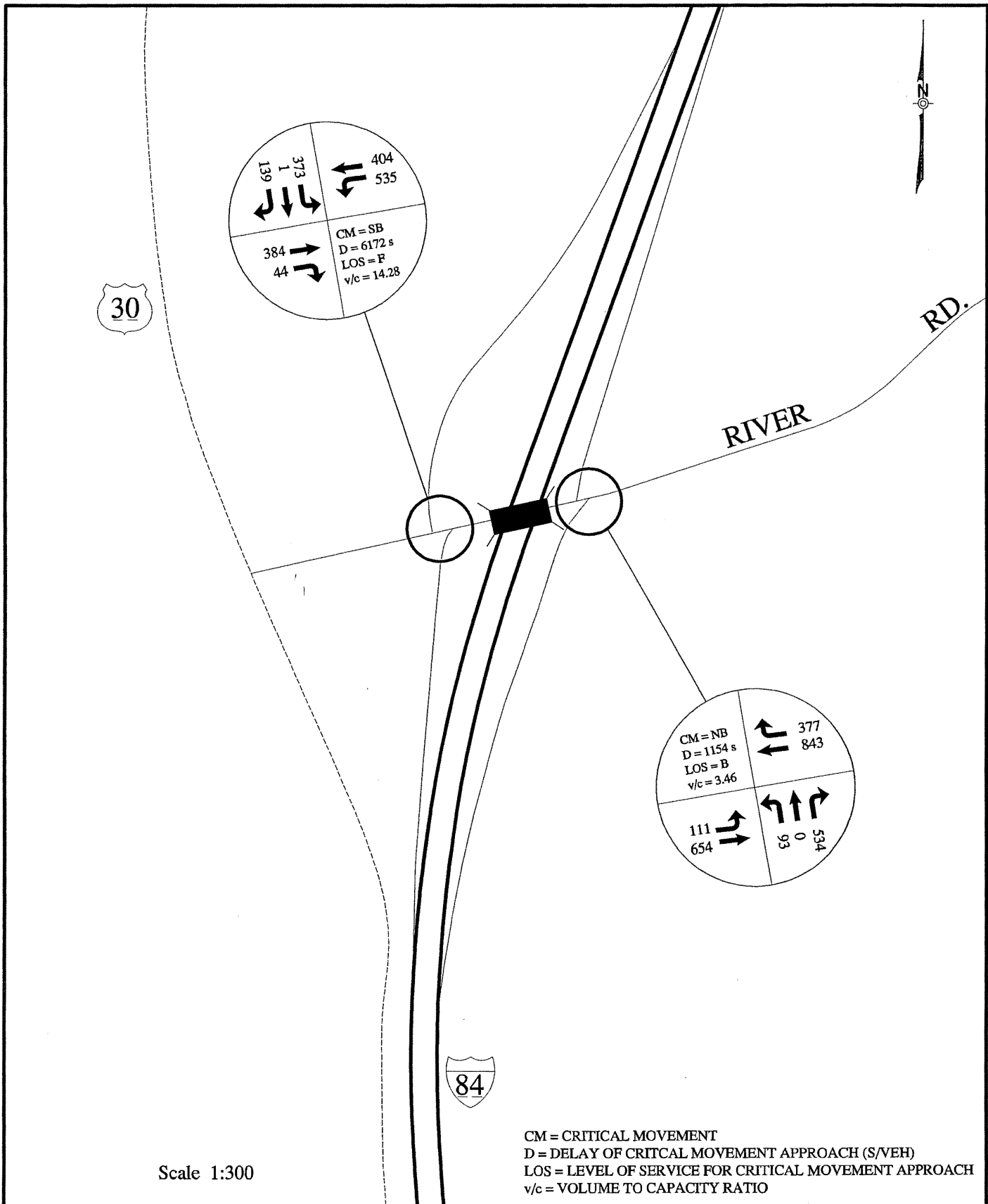
FIGURE 6  
EXISTING TRAFFIC  
2006 PM PEAK



**NWS** TRAFFIC  
 ENGINEERING

SHOPPING CENTER  
 T.I.S.  
 THE DALLES, OREGON

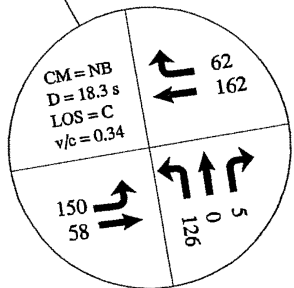
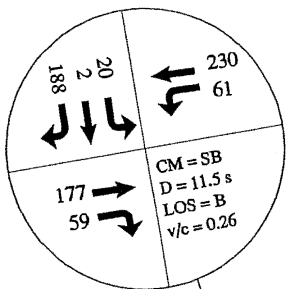
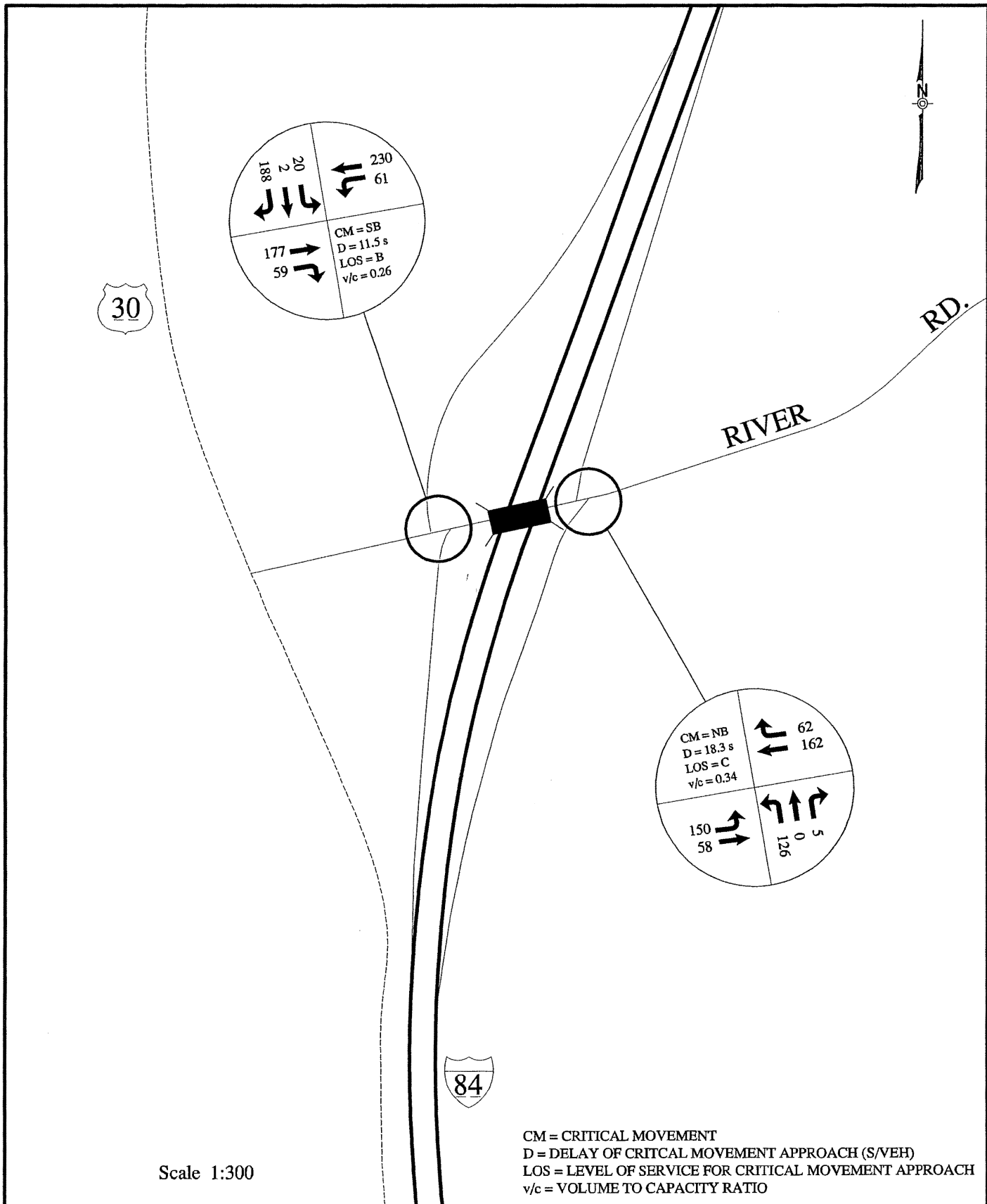
FIGURE 7  
 BACKGROUND TRAFFIC  
 2007 PM PEAK



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

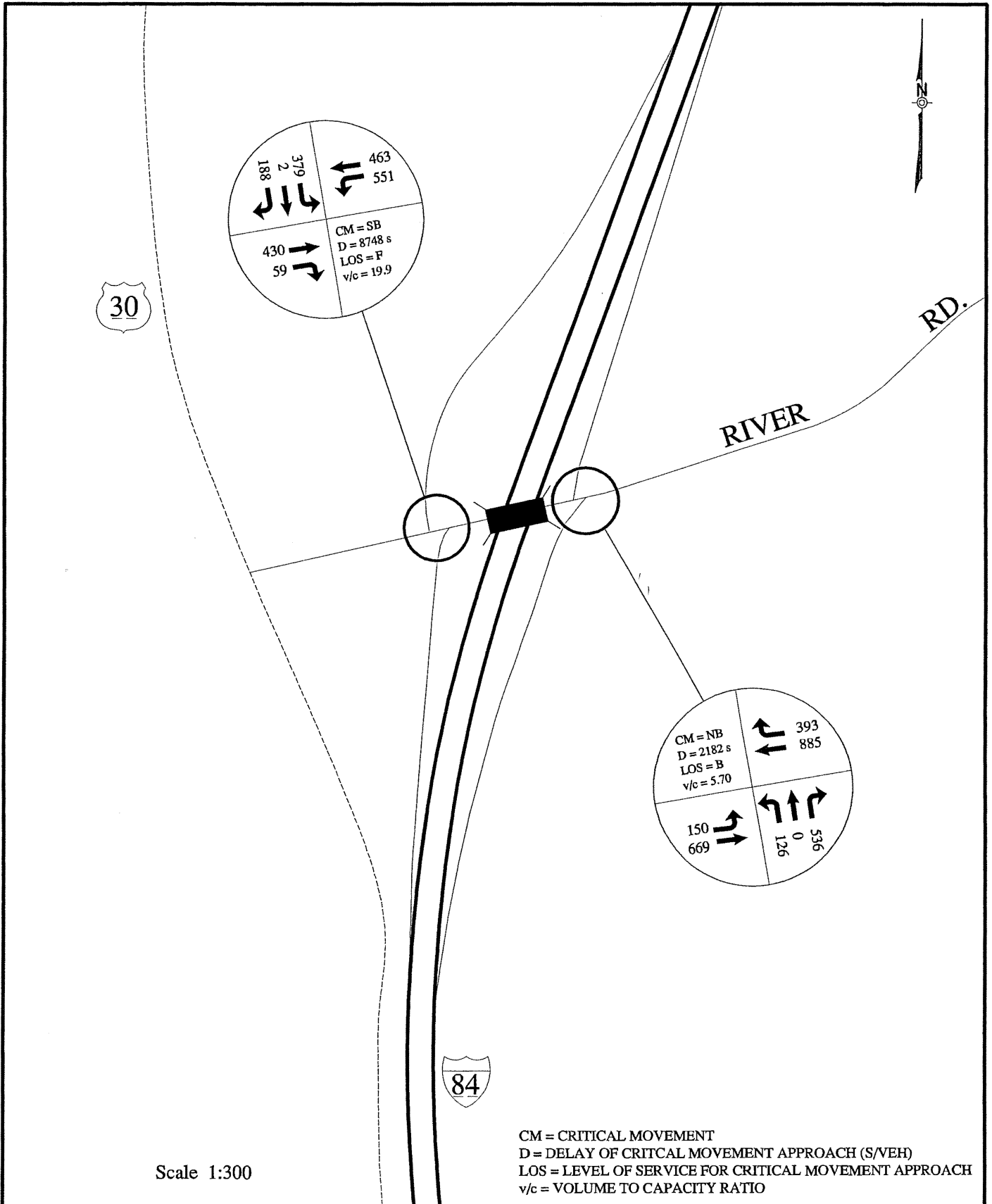
FIGURE 8  
TOTAL TRAFFIC  
2007 SATURDAY PEAK



**NWS TRAFFIC  
ENGINEERING**

SHOPPING CENTER  
T.I.S.  
THE DALLES, OREGON

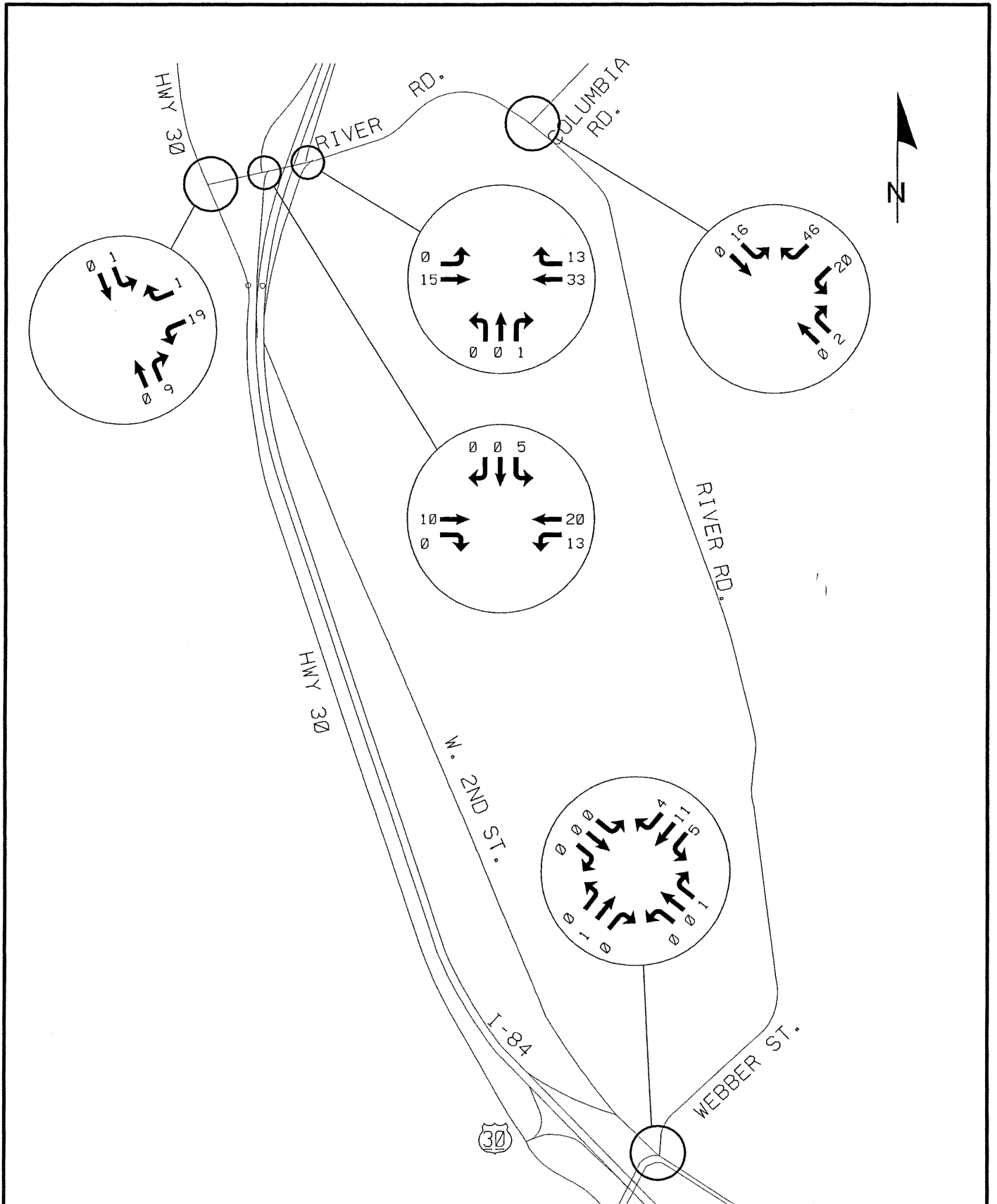
FIGURE 9  
BACKGROUND TRAFFIC  
2027 PM PEAK



**NWS TRAFFIC  
 ENGINEERING**

SHOPPING CENTER  
 T.I.S.  
 THE DALLES, OREGON

FIGURE 10  
 TOTAL TRAFFIC  
 2027 SATURDAY PEAK



**Appendix B**  
**Intersection Analyses**



## Intersection Turning Movement Summary Report

**Location** RIVER ROAD AT I-84 EB RAMPS

**Date** 12/8/2005

**Day of Week** Thursday

**Time Begin** 7:00

**Reviewed By:** BV

Time Period	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 - 7:15	11	25	0	0	13	1	0	0	0	10	0	5	65
7:15 - 7:30	14	36	0	0	19	0	0	0	0	15	0	5	89
7:30 - 7:45	32	31	0	0	12	1	0	0	0	21	0	8	105
7:45 - 8:00	21	28	0	0	12	2	0	0	0	23	0	6	92
8:00 - 8:15	12	28	0	0	13	4	0	0	0	12	0	5	74
8:15 - 8:30	11	24	0	0	9	4	0	0	0	18	0	2	68
8:30 - 8:45	12	40	0	0	9	4	0	0	0	19	0	2	86
8:45 - 9:00	6	24	0	0	20	1	0	0	0	16	0	5	72
<b>Movement Totals</b>	<b>119</b>	<b>236</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>134</b>	<b>0</b>	<b>38</b>	<b>651</b>
Enter Totals	355			124			0			172			
Exit Totals	274			241			0			136			

**Two-Hour Totals**

Light Trucks	7	12	0	0	4	2	0	0	0	10	0	3	38
Medium Trucks	0	22	0	0	19	4	0	0	0	2	0	2	49
Heavy Trucks	5	7	0	0	3	3	0	0	0	3	0	2	23
% Trucks	10.1%	17.4%	NA	NA	24.3%	52.9%	NA	NA	NA	11.2%	NA	18.4%	16.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

### Peak Hour Information

**Peak Hour** 7:15 8:15

	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Movement Total	79	123	0	0	56	7	0	0	0	71	0	24	360
Peak Hour Factor	0.62	0.85	NA	NA	0.74	0.44	NA	NA	NA	0.77	NA	0.75	0.86

Enter Totals	202			95			0			63		
Peak Hour Factor	0.80			0.82			NA			0.83		

Exit Totals	147			86			0			127		
Peak Hour Factor	0.90			0.65			NA			0.91		

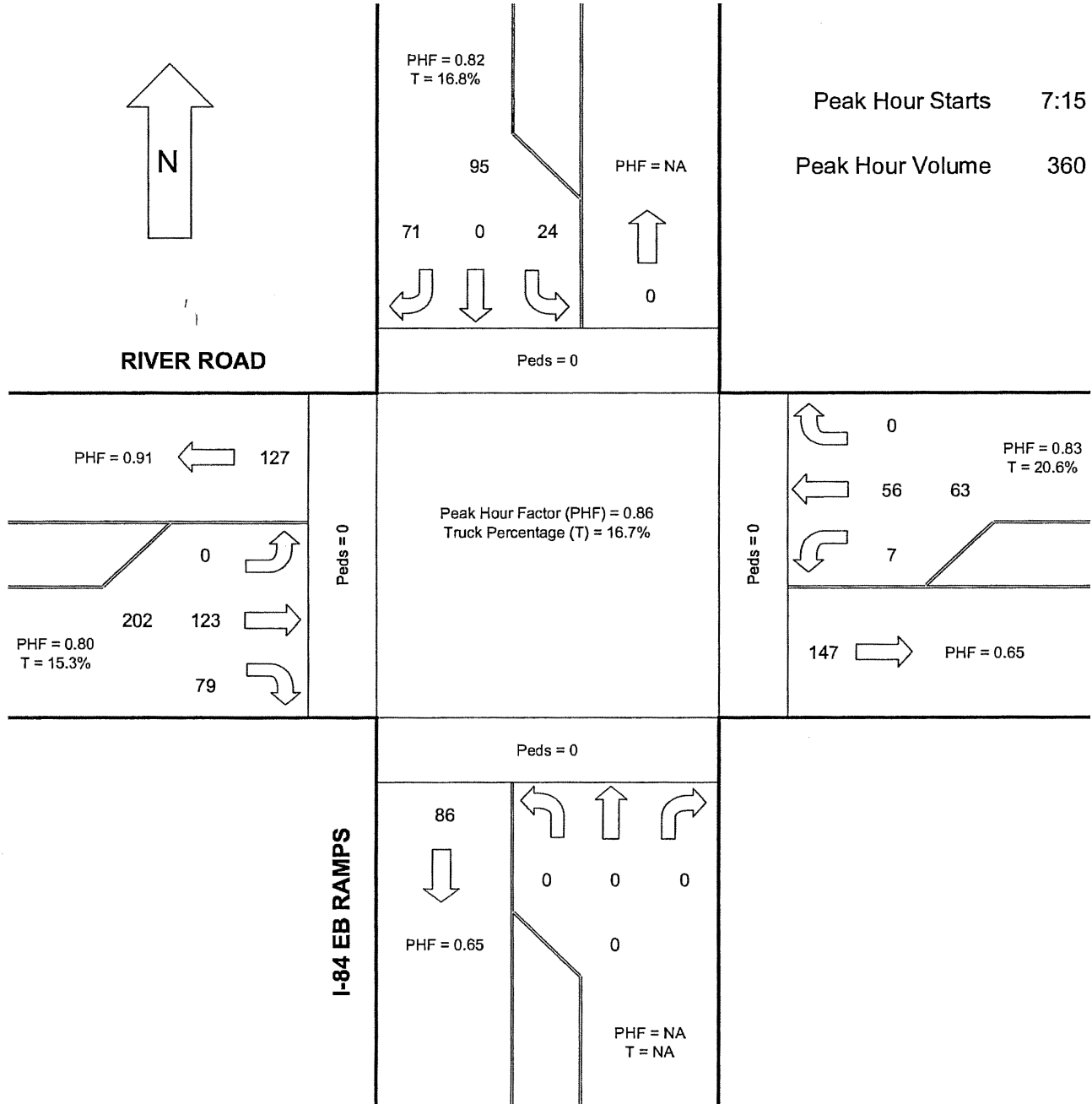
Light Trucks	4	7	0	0	0	0	0	0	0	7	0	2	20
Medium Trucks	0	13	0	0	9	1	0	0	0	1	0	2	26
Heavy Trucks	3	4	0	0	2	1	0	0	0	3	0	1	14
% Trucks	8.9%	19.5%	NA	NA	19.6%	28.6%	NA	NA	NA	15.5%	NA	20.8%	16.7%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0



## Intersection Turning Movement Peak Hour Diagram

**Location** RIVER ROAD AT I-84 EB RAMPS  
**Date** 12/8/2005  
**Day of Week** Thursday  
**Time Begin** 7:00  
**Reviewed By:** BV





## Intersection Turning Movement Summary Report

**Location** RIVER ROAD AT I-84 EB RAMPS

**Date** 12/7/2005

**Day of Week** Wednesday

**Time Begin** 16:00

**Reviewed By:** BV

Time Period	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
16:00 - 16:15	15	37	0	0	25	2	0	0	0	27	0	2	108
16:15 - 16:30	13	34	0	0	29	6	0	0	0	31	0	4	117
16:30 - 16:45	8	30	0	0	30	7	0	0	0	33	0	3	111
16:45 - 17:00	10	27	0	0	32	3	0	0	0	29	1	2	104
17:00 - 17:15	12	37	0	0	48	10	0	0	0	36	0	4	147
17:15 - 17:30	9	23	0	0	28	13	0	0	0	33	0	1	107
17:30 - 17:45	12	32	0	0	40	5	0	0	0	39	0	2	130
17:45 - 18:00	13	19	0	0	13	3	0	0	0	16	0	3	67
<b>Movement Totals</b>	<b>92</b>	<b>239</b>	<b>0</b>	<b>0</b>	<b>245</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>1</b>	<b>21</b>	<b>891</b>
Enter Totals	331			294			0			266			
Exit Totals	260			489			0			142			

### Two-Hour Totals

Light Trucks	1	5	0	0	6	5	0	0	0	6	0	7	30
Medium Trucks	0	18	0	0	13	0	0	0	0	0	0	0	31
Heavy Trucks	0	4	0	0	2	1	0	0	0	6	0	1	14
% Trucks	1.1%	11.3%	NA	NA	8.6%	12.2%	NA	NA	NA	4.9%	0.0%	38.1%	8.4%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0

### Peak Hour Information

**Peak Hour 16:45 17:45**

	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Movement Total	43	119	0	0	148	31	0	0	0	137	1	9	488
Peak Hour Factor	0.90	0.80	NA	NA	0.77	0.60	NA	NA	NA	0.88	0.25	0.56	0.83

Enter Totals	162			147			0			179		
Peak Hour Factor	0.83			0.90			NA			0.77		

Exit Totals	128			75			0			285		
Peak Hour Factor	0.78			0.85			NA			0.85		

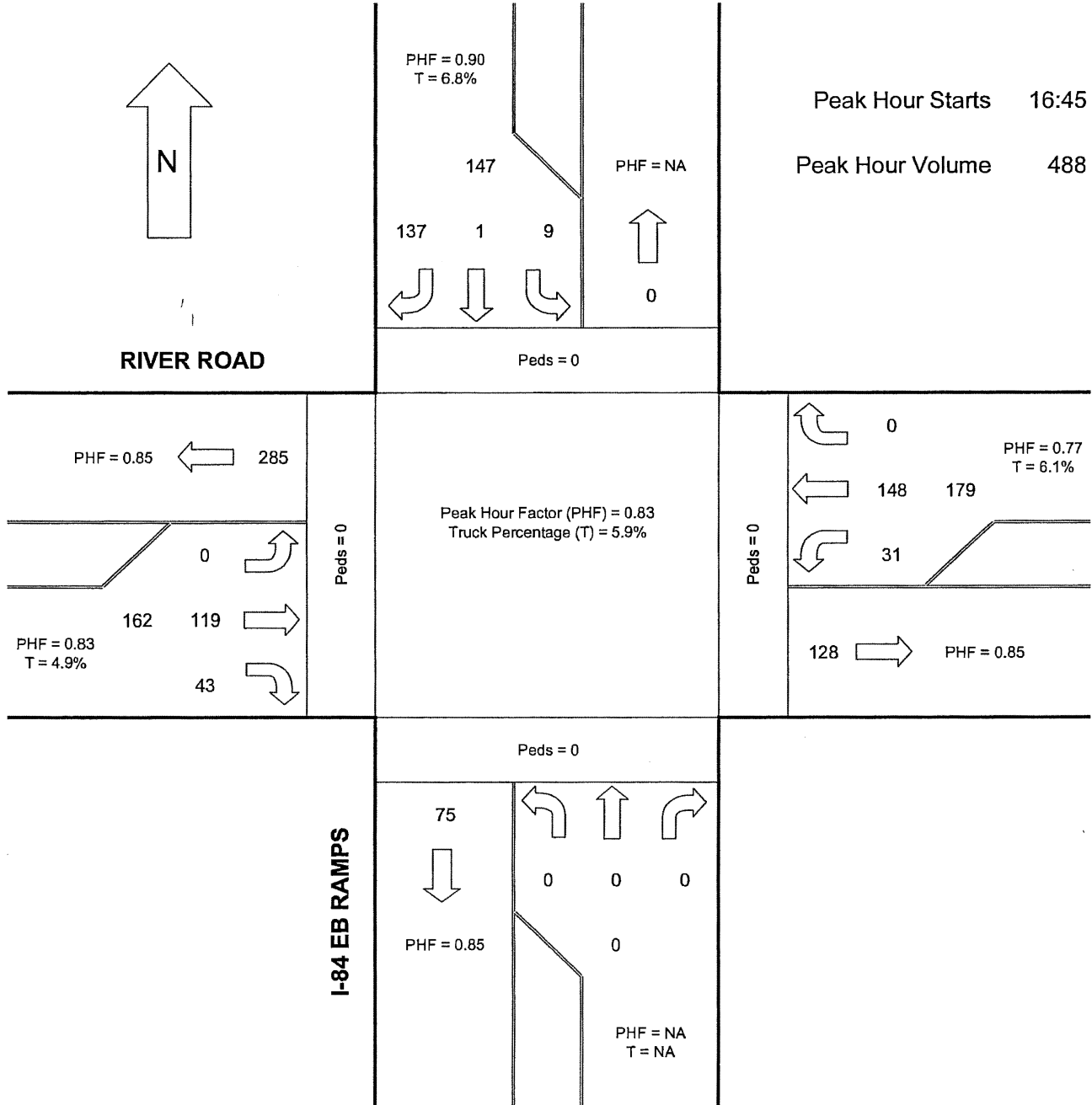
Light Trucks	0	3	0	0	3	4	0	0	0	3	0	5	18
Medium Trucks	0	2	0	0	2	0	0	0	0	0	0	0	4
Heavy Trucks	0	3	0	0	1	1	0	0	0	2	0	0	7
% Trucks	0.0%	6.7%	NA	NA	4.1%	16.1%	NA	NA	NA	3.6%	0.0%	55.6%	5.9%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0



## Intersection Turning Movement Peak Hour Diagram

**Location** RIVER ROAD AT I-84 EB RAMPS  
**Date** 12/7/2005  
**Day of Week** Wednesday  
**Time Begin** 16:00  
**Reviewed By:** BV





## Intersection Turning Movement Summary Report

Location RIVER ROAD AT I-84 WB RAMPS

Date 12/8/2005

Day of Week Thursday

Time Begin 7:00

Reviewed By: BV

Time Period	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 - 7:15	0	13	20	5	6	0	3	0	5	0	0	0	52
7:15 - 7:30	0	22	15	1	10	0	1	0	10	0	0	0	59
7:30 - 7:45	0	15	22	2	2	0	0	1	12	0	0	0	54
7:45 - 8:00	0	19	16	4	6	0	6	1	8	0	0	0	60
8:00 - 8:15	0	16	17	2	8	0	1	1	7	0	0	0	52
8:15 - 8:30	0	8	17	2	7	0	2	2	6	0	0	0	44
8:30 - 8:45	0	7	35	1	9	0	2	0	4	0	0	0	58
8:45 - 9:00	0	11	18	8	11	0	4	0	13	0	0	0	65
Movement Totals	0	111	160	25	59	0	19	5	65	0	0	0	444
Enter Totals	271			84			89			0			
Exit Totals	130			124			190			0			

### Two-Hour Totals

Light Trucks	0	5	9	4	6	0	2	0	1	0	0	0	27
Medium Trucks	0	23	0	2	20	0	3	0	1	0	0	0	49
Heavy Trucks	0	4	7	1	6	0	2	0	0	0	0	0	20
% Trucks	NA	28.8%	10.0%	28.0%	54.2%	NA	36.8%	0.0%	3.1%	NA	NA	NA	21.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians	South 0	West 0	East 0	North 0	0
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### Peak Hour Information

Peak Hour 7:00 8:00

	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Movement Total	0	69	73	12	24	0	10	2	35	0	0	0	225
Peak Hour Factor	NA	0.78	0.83	0.60	0.60	NA	0.42	0.50	0.73	NA	NA	NA	0.94

Enter Totals	142			0			47			36		
Peak Hour Factor	0.96			NA			0.78			0.82		

Exit Totals	79			0			87			59		
Peak Hour Factor	0.79			NA			0.87			0.74		

Light Trucks	0	3	2	2	1	0	0	0	0	0	0	0	8
Medium Trucks	0	15	0	1	10	0	0	0	1	0	0	0	27
Heavy Trucks	0	4	4	1	3	0	1	0	0	0	0	0	13
% Trucks	NA	31.9%	8.2%	33.3%	58.3%	NA	10.0%	0.0%	2.9%	NA	NA	NA	21.3%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians	South 0	West 0	East 0	North 0	0
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## Intersection Turning Movement Peak Hour Diagram

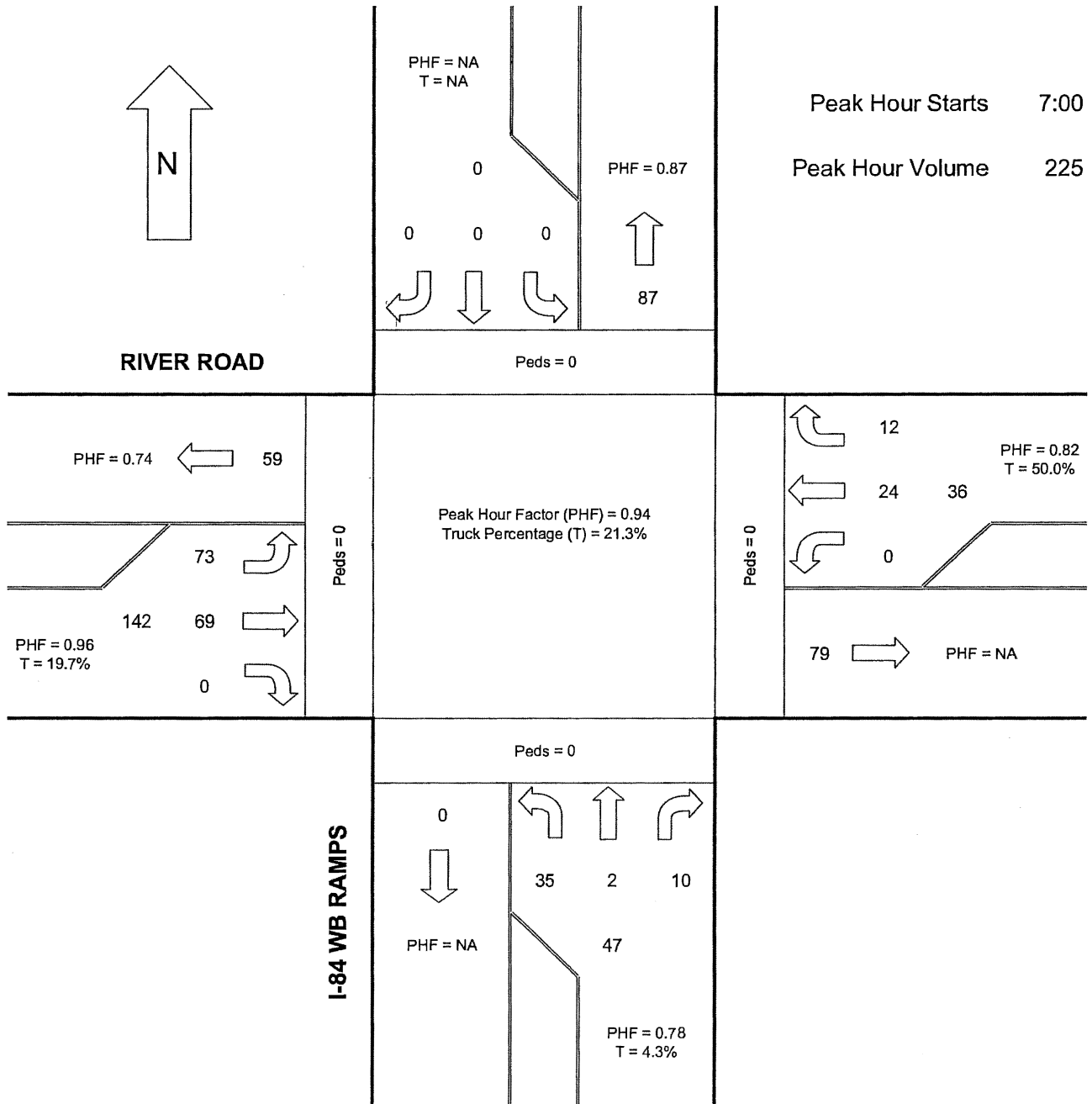
Location RIVER ROAD AT I-84 WB RAMPS

Date 12/8/2005

Day of Week Thursday

Time Begin 7:00

Reviewed By: BV





## Intersection Turning Movement Summary Report

Location RIVER ROAD AT I-84 WB RAMPS

Date 12/7/2005

Day of Week Wednesday

Time Begin 16:00

Reviewed By: BV

Time Period	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
16:00 - 16:15	0	15	28	2	12	0	1	0	12	0	0	0	70
16:15 - 16:30	0	12	25	4	17	0	1	0	13	0	0	0	72
16:30 - 16:45	0	13	20	10	21	0	0	0	18	0	0	0	82
16:45 - 17:00	0	13	20	5	20	0	0	0	19	0	0	0	77
17:00 - 17:15	0	7	36	5	26	0	1	0	26	0	0	0	101
17:15 - 17:30	0	4	24	11	21	0	0	0	24	0	0	0	84
17:30 - 17:45	0	3	29	11	18	0	1	0	23	0	0	0	85
17:45 - 18:00	0	5	17	1	9	0	0	0	9	0	0	0	41
Movement Totals	0	72	199	49	144	0	4	0	144	0	0	0	612
Enter Totals	271			193			148			0			
Exit Totals	76			288			248			0			

### Two-Hour Totals

Light Trucks	0	11	6	1	2	0	1	0	3	0	0	0	24
Medium Trucks	0	17	0	2	14	0	0	0	0	0	0	0	33
Heavy Trucks	0	2	5	3	0	0	1	0	3	0	0	0	14
% Trucks	NA	41.7%	5.5%	12.2%	11.1%	NA	50.0%	NA	4.2%	NA	NA	NA	11.6%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	1	0	0	0	0	0	0	0	0	0	0	1

	South	West	East	North	
Pedestrians	0	0	0	0	0

### Peak Hour Information

Peak Hour 16:45 17:45

	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Movement Total	0	27	109	32	85	0	2	0	92	0	0	0	347
Peak Hour Factor	NA	0.52	0.76	0.73	0.82	NA	0.50	NA	0.88	NA	NA	NA	0.86

Enter Totals	136			0			94			117			
Peak Hour Factor	0.79			NA			0.87			0.91			

Exit Totals	29			0			141			177			
Peak Hour Factor	0.56			NA			0.86			0.85			

Light Trucks	0	7	3	1	1	0	1	0	2	0	0	0	15
Medium Trucks	0	2	0	2	2	0	0	0	0	0	0	0	6
Heavy Trucks	0	0	3	0	0	0	1	0	2	0	0	0	6
% Trucks	NA	33.3%	5.5%	9.4%	3.5%	NA	100.0%	NA	4.3%	NA	NA	NA	7.8%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0

	South	West	East	North	
Pedestrians	0	0	0	0	0



## Intersection Turning Movement Peak Hour Diagram

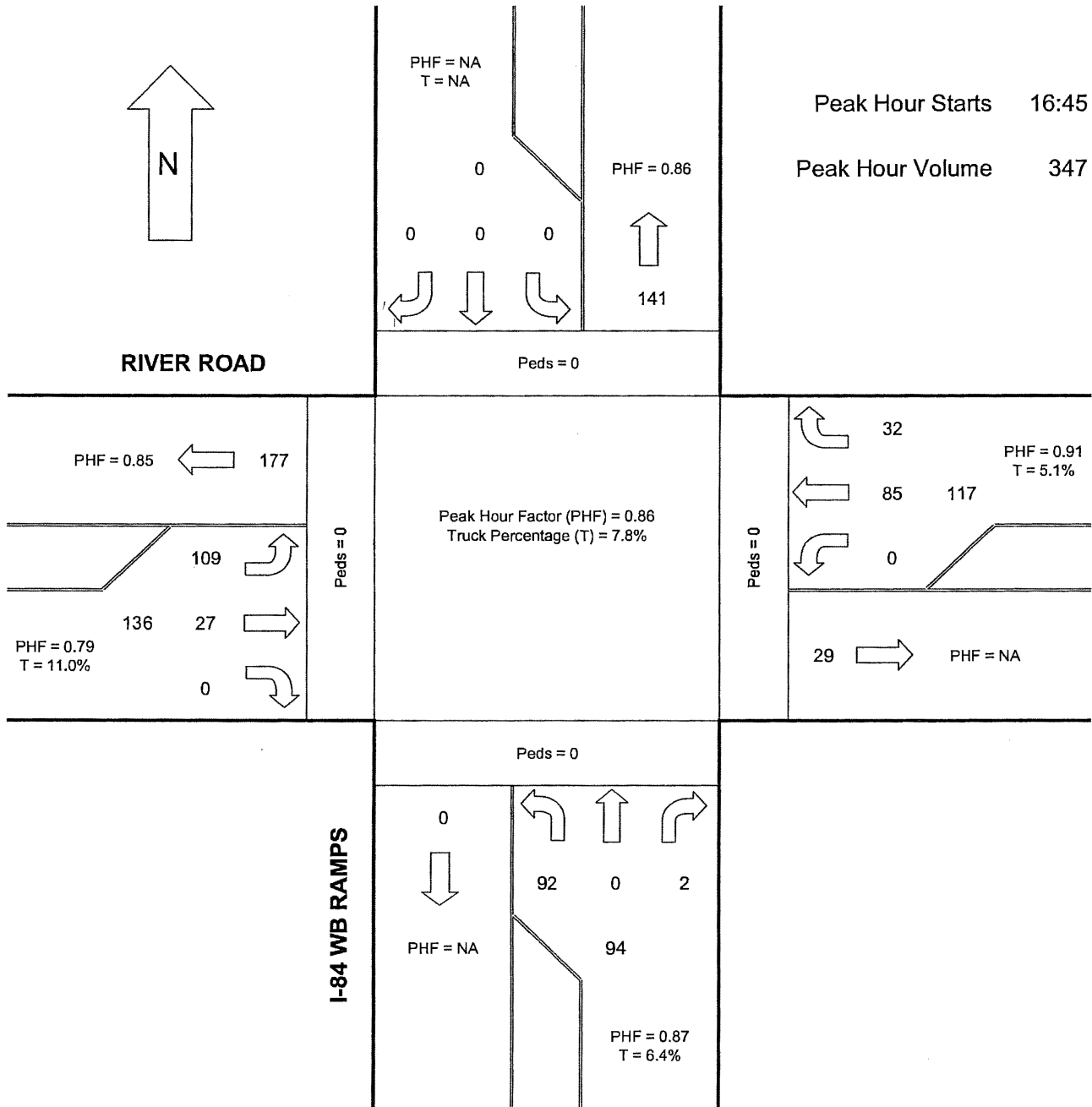
Location RIVER ROAD AT I-84 WB RAMPS

Date 12/7/2005

Day of Week Wednesday

Time Begin 16:00

Reviewed By: BV





**Appendix C**  
**Traffic Counts**

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 EB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2007</i>						
						Project ID <i>Signalized 2 controllers</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>l</sub>	0	1	0	1	1	0	0	0	0	0	1	1
Lane group		TR		L	T						LT	R
Volume, V (vph)		384	44	535	404					373	1	139
% Heavy vehicles, %HV		3	3	3	3					3	3	3
Peak-hour factor, PHF		0.92	0.92	0.92	0.92					0.92	0.92	0.92
Pretimed (P) or actuated (A)		P	P	P	P					A	A	A
Start-up lost time, I <sub>1</sub>		2.0		2.0	2.0						2.0	2.0
Extension of effective green, e		2.0		2.0	2.0						2.0	2.0
Arrival type, AT		3		4	4						3	3
Unit extension, UE		3.0		3.0	3.0						3.0	3.0
Filtering/metering, I		1.000		0.090	0.090						1.000	1.000
Initial unmet demand, Q <sub>b</sub>		0.0		0.0	0.0						0.0	0.0
Ped / Bike / RTOR volumes	0	0	7				0			0	0	112
Lane width		13.0		11.0	10.0						14.0	14.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>		0		0	0						0	0
Min. time for pedestrians, G <sub>p</sub>		3.2					3.2				3.2	
Phasing	EW Perm	02	03	04	SB Only	06	07	08				
Timing	G = 36.7	G =	G =	G =	G = 15.3	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 60.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		457		582	439						406	29
Lane group capacity, c		1152		478	1053						478	426
v/c ratio, X		0.40		1.22	0.42						0.85	0.07
Total green ratio, g/C		0.61		0.61	0.61						0.25	0.25
Uniform delay, d <sub>1</sub>		6.0		11.6	6.1						21.3	16.9

Progression factor, PF	1.000	0.652	0.546					1.000	1.000
Delay calibration, k	0.50	0.50	0.50					0.38	0.11
Incremental delay, $d_2$	1.0	99.8	0.1					13.5	0.1
Initial queue delay, $d_3$	0.0	0.0	0.0			0.0		0.0	0.0
Control delay	7.0	107.4	3.4					34.8	17.0
Lane group LOS	A	F	A					C	B
Approach delay	7.0	62.7						33.6	
Approach LOS	A	E						C	
Intersection delay	42.8	$X_c = 1.11$				Intersection LOS		D	

HCS2000™

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Version 4.1f

<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 WB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2007</i>						
						Project ID <i>Signalized with 2 controllers</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N <sub>l</sub>	1	1	0	0	1	0	0	1	1	0	0	0
Lane group	L	T			TR			LT	R			
Volume, V (vph)	111	654			843	377	93	0	534			
% Heavy vehicles, %HV	3	3			3	3	3	3	3			
Peak-hour factor, PHF	0.92	0.92			0.92	0.92	0.92	0.92	0.92			
Pretimed (P) or actuated (A)	P	P			P	P	A	A	A			
Start-up lost time, I <sub>1</sub>	2.0	2.0			2.0			2.0	2.0			
Extension of effective green, e	2.0	2.0			2.0			2.0	2.0			
Arrival type, AT	2	2			3			3	3			
Unit extension, UE	3.0	3.0			3.0			3.0	3.0			
Filtering/metering, I	0.805	0.805			1.000			1.000	1.000			
Initial unmet demand, Q <sub>b</sub>	0.0	0.0			0.0			0.0	0.0			
Ped / Bike / RTOR volumes				0	0	27	0	0	170	0		
Lane width	11.0	10.0			14.0			14.0	12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N <sub>m</sub>												
Buses stopping, N <sub>B</sub>	0	0			0			0	0			
Min. time for pedestrians, G <sub>p</sub>				3.2			3.2			3.2		
Phasing	EW Perm	02	03	04	NB Only	06	07	08				
Timing	G = 36.0	G =	G =	G =	G = 16.0	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 60.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	121	711			1296			101	396			
Lane group capacity, c	139	1033			1134			500	418			
v/c ratio, X	0.87	0.69			1.14			0.20	0.95			
Total green ratio, g/C	0.60	0.60			0.60			0.27	0.27			
Uniform delay, d <sub>1</sub>	10.0	8.2			12.0			17.1	21.6			

Progression factor, PF	1.395	1.395			1.000			1.000	1.000			
Delay calibration, k	0.50	0.50			0.50			0.11	0.46			
Incremental delay, $d_2$	41.1	3.0			75.1			0.2	30.9			
Initial queue delay, $d_3$	0.0	0.0			0.0			0.0	0.0		0.0	
Control delay	55.1	14.4			87.1			17.3	52.5			
Lane group LOS	E	B			F			B	D			
Approach delay	20.4				87.1				45.3			
Approach LOS	C				F				D			
Intersection delay	58.1				$X_c = 1.08$				Intersection LOS		E	

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<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 WB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2027</i>						
						Project ID <i>Signalized 2 controllers</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	1	1	0	0	1	0	0	1	1	0	0	0
Lane group	L	T			TR			LT	R			
Volume, V (vph)	150	669			885	393	126	0	536			
% Heavy vehicles, %HV	3	3			3	3	3	3	3			
Peak-hour factor, PHF	0.92	0.92			0.92	0.92	0.92	0.92	0.92			
Pretimed (P) or actuated (A)	P	P			P	P	A	A	A			
Start-up lost time, $l_1$	2.0	2.0			2.0			2.0	2.0			
Extension of effective green, $e$	2.0	2.0			2.0			2.0	2.0			
Arrival type, AT	2	2			3			3	3			
Unit extension, UE	3.0	3.0			3.0			3.0	3.0			
Filtering/metering, I	0.780	0.780			1.000			1.000	1.000			
Initial unmet demand, $Q_b$	0.0	0.0			0.0			0.0	0.0			
Ped / Bike / RTOR volumes				0	0	27	0	0	164	0		
Lane width	11.0	10.0			14.0			14.0	12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$	0	0			0			0	0			
Min. time for pedestrians, $G_p$				3.2			3.2			3.2		
Phasing	EW Perm	02	03	04	NB Only	06	07	08				
Timing	G = 36.0	G =	G =	G =	G = 16.0	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 60.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	163	727			1360			137	404			
Lane group capacity, c	126	1033			1134			500	418			
v/c ratio, X	1.29	0.70			1.20			0.27	0.97			
Total green ratio, g/C	0.60	0.60			0.60			0.27	0.27			
Uniform delay, $d_1$	12.0	8.3			12.0			17.4	21.7			

Progression factor, PF	1.138	1.395			1.000			1.000	1.000			
Delay calibration, k	0.50	0.50			0.50			0.11	0.47			
Incremental delay, $d_2$	170.2	3.2			98.4			0.3	35.3			
Initial queue delay, $d_3$	0.0	0.0			0.0			0.0	0.0		0.0	
Control delay	183.9	14.7			110.4			17.7	57.0			
Lane group LOS	F	B			F			B	E			
Approach delay	45.7				110.4				47.0			
Approach LOS	D				F				D			
Intersection delay	77.5				$X_c = 1.19$		Intersection LOS				E	

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<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 EB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2007</i>						
						Project ID <i>Signalized Diamond</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	1	1	0	0	0	0	0	1	1
Lane group		TR		L	T						LT	R
Volume, V (vph)		384	44	535	404					373	1	139
% Heavy vehicles, %HV		3	3	3	3					3	3	3
Peak-hour factor, PHF		0.92	0.92	0.92	0.92					0.92	0.92	0.92
Pretimed (P) or actuated (A)		P	P	A	P					A	A	A
Start-up lost time, $l_1$		2.0		2.0	2.0						2.0	2.0
Extension of effective green, $e$		2.0		2.0	2.0						2.0	2.0
Arrival type, AT		3		5	2						3	3
Unit extension, UE		3.0		3.0	3.0						3.0	3.0
Filtering/metering, I		1.000		0.090	0.090						1.000	1.000
Initial unmet demand, $Q_b$		0.0		0.0	0.0						0.0	0.0
Ped / Bike / RTOR volumes	0	0	2				0			0	0	63
Lane width		13.0		11.0	10.0						14.0	14.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0		0	0						0	0
Min. time for pedestrians, $G_p$		3.2					3.2				3.2	
Phasing	Thru & RT	WB Only	WB Only	04		SB Only	SB Only	07		08		
Timing	G = 31.5	G = 52.7	G = 11.0	G =	G = 17.5	G = 17.3	G =	G =		G =		
	Y = 4	Y = 4	Y = 4	Y =	Y = 4	Y = 4	Y =	Y =		Y =		
Duration of Analysis, T = 0.25							Cycle Length, C = 150.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		463		582	439						406	83
Lane group capacity, c		395		765	362						485	432
v/c ratio, X		1.17		0.76	1.21						0.84	0.19
Total green ratio, g/C		0.21		0.45	0.21						0.26	0.26
Uniform delay, $d_1$		59.3		34.4	59.3						52.6	43.4

Progression factor, PF	1.000	0.452	1.012					1.000	1.000
Delay calibration, k	0.50	0.31	0.50					0.37	0.11
Incremental delay, $d_2$	101.2	0.4	98.2					12.2	0.2
Initial queue delay, $d_3$	0.0	0.0	0.0			0.0		0.0	0.0
Control delay	160.5	15.9	158.2					64.8	43.6
Lane group LOS	F	B	F					E	D
Approach delay	160.5		77.1					61.2	
Approach LOS	F		E					E	
Intersection delay	92.7		$X_c = 0.89$		Intersection LOS			F	

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<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 WB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2007</i>						
						Project ID <i>Signalized Diamond</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	1	1	0	0	1	0	0	1	1	0	0	0
Lane group	L	T			TR			LT	R			
Volume, V (vph)	111	654			843	377	93	0	534			
% Heavy vehicles, %HV	3	3			3	3	3	3	3			
Peak-hour factor, PHF	0.92	0.92			0.92	0.92	0.92	0.92	0.92			
Pretimed (P) or actuated (A)	A	A			A	A	A	A	A			
Start-up lost time, $I_1$	2.0	2.0			2.0			2.0	2.0			
Extension of effective green, $e$	2.0	2.0			2.0			2.0	2.0			
Arrival type, AT	5	2			3			3	3			
Unit extension, UE	3.0	3.0			3.0			3.0	3.0			
Filtering/metering, I	0.090	0.090			1.000			1.000	1.000			
Initial unmet demand, $Q_b$	0.0	0.0			0.0			0.0	0.0			
Ped / Bike / RTOR volumes				0		11	0	0	244	0		
Lane width	11.0	10.0			14.0			14.0	12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, $N_m$												
Buses stopping, $N_b$	0	0			0			0	0			
Min. time for pedestrians, $G_p$				3.2			3.2			3.2		
Phasing	EB Only	Thru & RT	Thru & RT	04	NB Only	NB Only	07	08				
Timing	G = 31.5	G = 17.3	G = 52.7	G =	G = 17.5	G = 11.0	G =	G =				
	Y = 4	Y = 4	Y = 4	Y =	Y = 4	Y = 4	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 150.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	121	711			1314			101	315			
Lane group capacity, c	356	1257			931			406	340			
v/c ratio, X	0.34	0.57			1.41			0.25	0.93			
Total green ratio, g/C	0.21	0.73			0.49			0.22	0.22			
Uniform delay, $d_1$	50.4	9.3			38.0			48.6	57.6			

Progression factor, PF	0.823	1.768			1.000			1.000	1.000			
Delay calibration, k	0.11	0.16			0.50			0.11	0.44			
Incremental delay, $d_2$	0.1	0.1			191.5			0.3	30.7			
Initial queue delay, $d_3$	0.0	0.0			0.0			0.0	0.0		0.0	
Control delay	41.5	16.5			229.5			49.0	88.2			
Lane group LOS	D	B			F			D	F			
Approach delay	20.2		229.5			78.7						
Approach LOS	C		F			E						
Intersection delay	137.0		$X_c = 1.05$			Intersection LOS			F			

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<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 EB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2027</i>						
						Project ID <i>Signalized Diamond</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_1$	0	1	0	1	1	0	0	0	0	0	1	1
Lane group		TR		L	T						LT	R
Volume, V (vph)		430	59	551	463					379	2	188
% Heavy vehicles, %HV		3	3	3	3					3	3	3
Peak-hour factor, PHF		0.92	0.92	0.92	0.92					0.92	0.92	0.92
Pretimed (P) or actuated (A)		P	P	A	P					A	A	A
Start-up lost time, $l_1$		2.0		2.0	2.0						2.0	2.0
Extension of effective green, $e$		2.0		2.0	2.0						2.0	2.0
Arrival type, AT		3		5	2						3	3
Unit extension, UE		3.0		3.0	3.0						3.0	3.0
Filtering/metering, I		1.000		0.090	0.090						1.000	1.000
Initial unmet demand, $Q_b$		0.0		0.0	0.0						0.0	0.0
Ped / Bike / RTOR volumes	0	0	3				0			0	0	83
Lane width		13.0		11.0	10.0						14.0	14.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$		0		0	0						0	0
Min. time for pedestrians, $G_p$		3.2						3.2			3.2	
Phasing	Thru & RT	WB Only	WB Only	04	SB Only	SB Only	07	08				
Timing	G = 31.5	G = 52.4	G = 11.0	G =	G = 17.5	G = 17.6	G =	G =				
	Y = 4	Y = 4	Y = 4	Y =	Y = 4	Y = 4	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 150.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		528		599	503						414	114
Lane group capacity, c		394		761	362						488	436
v/c ratio, X		1.34		0.79	1.39						0.85	0.26
Total green ratio, g/C		0.21		0.45	0.21						0.26	0.26
Uniform delay, $d_1$		59.3		35.2	59.3						52.6	44.0

Progression factor, PF	1.000	0.456	1.012					1.000	1.000
Delay calibration, k	0.50	0.33	0.50					0.38	0.11
Incremental delay, $d_2$	169.3	0.5	176.9					13.2	0.3
Initial queue delay, $d_3$	0.0	0.0	0.0			0.0		0.0	0.0
Control delay	228.6	16.6	236.8					65.8	44.3
Lane group LOS	F	B	F					E	D
Approach delay	228.6		117.1					61.2	
Approach LOS	F		F					E	
Intersection delay	130.7		$X_c = 0.94$		Intersection LOS			F	

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<b>HCS2000™ DETAILED REPORT</b>												
<b>General Information</b>						<b>Site Information</b>						
Analyst <i>B. Morton</i>						Intersection <i>River Rd &amp; I-84 WB</i>						
Agency or Co. <i>Shopping Center TIS</i>						Area Type <i>All other areas</i>						
Date Performed <i>05/16/2006</i>						Jurisdiction						
Time Period <i>4:30 pm</i>						Analysis Year <i>Total Traffic 2027</i>						
						Project ID <i>Signalized Diamon</i>						
<b>Volume and Timing Input</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, $N_l$	1	1	0	0	1	0	0	1	1	0	0	0
Lane group	L	T			TR			LT	R			
Volume, V (vph)	150	669			885	393	126	0	536			
% Heavy vehicles, %HV	3	3			3	3	3	3	3			
Peak-hour factor, PHF	0.92	0.92			0.92	0.92	0.92	0.92	0.92			
Pretimed (P) or actuated (A)	A	A			A	A	A	A	A			
Start-up lost time, $l_1$	2.0	2.0			2.0			2.0	2.0			
Extension of effective green, $e$	2.0	2.0			2.0			2.0	2.0			
Arrival type, AT	5	2			3			3	3			
Unit extension, UE	3.0	3.0			3.0			3.0	3.0			
Filtering/metering, I	0.090	0.090			1.000			1.000	1.000			
Initial unmet demand, $Q_b$	0.0	0.0			0.0			0.0	0.0			
Ped / Bike / RTOR volumes				0		11	0	0	237	0		
Lane width	11.0	10.0			14.0			14.0	12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, $N_m$												
Buses stopping, $N_B$	0	0			0			0	0			
Min. time for pedestrians, $G_p$				3.2			3.2			3.2		
Phasing	EB Only	Thru & RT	Thru & RT	04			NB Only	NB Only	07		08	
Timing	G = 31.5	G = 17.6	G = 52.4	G =			G = 17.5	G = 11.0	G =		G =	
	Y = 4	Y = 4	Y = 4	Y =			Y = 4	Y = 4	Y =		Y =	
Duration of Analysis, T = 0.25							Cycle Length, C = 150.0					
<b>Lane Group Capacity, Control Delay, and LOS Determination</b>												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	163	727			1377			137	325			
Lane group capacity, c	356	1257			931			406	340			
v/c ratio, X	0.46	0.58			1.48			0.34	0.96			
Total green ratio, g/C	0.21	0.73			0.49			0.22	0.22			
Uniform delay, $d_1$	51.8	9.5			38.0			49.7	58.0			

Progression factor, PF	0.823	1.768			1.000			1.000	1.000			
Delay calibration, k	0.11	0.17			0.50			0.11	0.47			
Incremental delay, $d_2$	0.1	0.1			221.4			0.5	37.2			
Initial queue delay, $d_3$	0.0	0.0			0.0			0.0	0.0		0.0	
Control delay	42.7	16.8			259.4			50.1	95.2			
Lane group LOS	D	B			F			D	F			
Approach delay	21.5		259.4			81.9						
Approach LOS	C		F			F						
Intersection delay	151.8		$X_c = 1.12$			Intersection LOS		F				

**Appendix D**  
**Gravity Models**

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 EB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Background 2007			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 EB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	131	44	45	171	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	142	47	48	185	0		
Proportion of heavy vehicles, P <sub>HV</sub>	5	--	--	6	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	14	1	139		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	0	0	15	1	151		
Proportion of heavy vehicles, P <sub>HV</sub>	2	2	2	7	7	7		
Percent grade (%)	0			0				
Flared approach		N			Y			
Storage		0			6			
RT Channelized?			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L					LTR	
Volume, v (vph)		48					167	
Capacity, c <sub>m</sub> (vph)		1361					935	
v/c ratio		0.04					0.18	
Queue length (95%)		0.11					0.65	
Control Delay (s/veh)		7.7					10.4	
LOS		A					B	
Approach delay (s/veh)	--	--				10.4		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 WB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Background 2007			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 WB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	111	43	0	0	120	46		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	120	46	0	0	130	49		
Proportion of heavy vehicles, P <sub>HV</sub>	11	--	--	17	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	93	0	3	0	0	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	101	0	3	0	0	0		
Proportion of heavy vehicles, P <sub>HV</sub>	6	6	6	2	2	2		
Percent grade (%)	0			0				
Flared approach		Y			N			
Storage		2			0			
RT Channelized?			0			0		
Lanes	0	1	0	0	0	0		
Configuration		LTR						
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR				
Volume, v (vph)	120			104				
Capacity, c <sub>m</sub> (vph)	1344			531				
v/c ratio	0.09			0.20				
Queue length (95%)	0.29			0.72				
Control Delay (s/veh)	7.9			13.5				
LOS	A			B				
Approach delay (s/veh)	--	--		13.5				
Approach LOS	--	--		B				

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	B. Morton			Intersection	River Rd & I-84 EB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Total Traffic 2007			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 EB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	384	44	535	404	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	417	47	581	439	0		
Proportion of heavy vehicles, P <sub>HV</sub>	3	--	--	3	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	373	1	139		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	0	0	405	1	151		
Proportion of heavy vehicles, P <sub>HV</sub>	3	3	3	3	3	3		
Percent grade (%)	0			0				
Flared approach		N			Y			
Storage		0			6			
RT Channelized?			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
<b>Control Delay, Queue Length, Level of Service</b>								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L					LTR	
Volume, v (vph)		581					557	
Capacity, c <sub>m</sub> (vph)		1092					39	
v/c ratio		0.53					14.28	
Queue length (95%)		3.25					67.83	
Control Delay (s/veh)		12.0					6172	
LOS		B					F	
Approach delay (s/veh)	--	--					6172	
Approach LOS	--	--					F	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 WB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Total Traffic 2007			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 WB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	111	654	0	0	843	377		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	120	710	0	0	916	409		
Proportion of heavy vehicles, P <sub>HV</sub>	3	--	--	3	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	93	0	534	0	0	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	101	0	580	0	0	0		
Proportion of heavy vehicles, P <sub>HV</sub>	3	3	3	3	3	3		
Percent grade (%)	0			0				
Flared approach		Y			N			
Storage		2			0			
RT Channelized?			0			0		
Lanes	0	1	0	0	0	0		
Configuration		LTR						
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR				
Volume, v (vph)	120			681				
Capacity, c <sub>m</sub> (vph)	518			197				
v/c ratio	0.23			3.46				
Queue length (95%)	0.89			64.46				
Control Delay (s/veh)	14.0			1154				
LOS	B			F				
Approach delay (s/veh)	--	--	1154					
Approach LOS	--	--	F					

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 EB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Background Traffic 2027			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 EB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	177	59	61	230	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	192	64	66	249	0		
Proportion of heavy vehicles, P <sub>HV</sub>	5	--	--	6	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	20	2	188		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	0	0	21	2	204		
Proportion of heavy vehicles, P <sub>HV</sub>	2	2	2	7	7	7		
Percent grade (%)	0			0				
Flared approach		N			Y			
Storage		0			6			
RT Channelized?			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L					LTR	
Volume, v (vph)		66					227	
Capacity, c <sub>m</sub> (vph)		1286					866	
v/c ratio		0.05					0.26	
Queue length (95%)		0.16					1.05	
Control Delay (s/veh)		8.0					11.5	
LOS		A					B	
Approach delay (s/veh)	--	--					11.5	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 WB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Background Traffic 2027			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 WB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	150	58	0	0	162	62		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	163	63	0	0	176	67		
Proportion of heavy vehicles, P <sub>HV</sub>	11	--	--	17	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	126	0	5	0	0	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	136	0	5	0	0	0		
Proportion of heavy vehicles, P <sub>HV</sub>	6	6	6	2	2	2		
Percent grade (%)	0			0				
Flared approach		Y			N			
Storage		2			0			
RT Channelized?			0			0		
Lanes	0	1	0	0	0	0		
Configuration		LTR						
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR				
Volume, v (vph)	163			141				
Capacity, c <sub>m</sub> (vph)	1272			414				
v/c ratio	0.13			0.34				
Queue length (95%)	0.44			1.48				
Control Delay (s/veh)	8.2			18.3				
LOS	A			C				
Approach delay (s/veh)	--	--	18.3					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	B. Morton			Intersection	River Rd & I-84 EB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Total Traffic 2027			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 EB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	430	59	551	463	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	467	64	598	503	0		
Proportion of heavy vehicles, P <sub>HV</sub>	3	--	--	3	--	--		
Median type	Undivided							
RT Channelized?			0				0	
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	379	2	188		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	0	0	411	2	204		
Proportion of heavy vehicles, P <sub>HV</sub>	3	3	3	3	3	3		
Percent grade (%)	0			0				
Flared approach		N			Y			
Storage		0			6			
RT Channelized?			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
Control Delay, Queue Length, Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L					LTR	
Volume, v (vph)		598					617	
Capacity, c <sub>m</sub> (vph)		1031					31	
v/c ratio		0.58					19.90	
Queue length (95%)		3.87					76.28	
Control Delay (s/veh)		13.2					8748	
LOS		B					F	
Approach delay (s/veh)	--	--					8748	
Approach LOS	--	--					F	

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	B. Morton			Intersection	River Rd & I-84 WB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Total Traffic 2027			
Analysis Time Period	4:30 pm							
<b>Project Description</b>								
East/West Street: River Road				North/South Street: I-84 WB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	150	669	0	0	885	393		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	163	727	0	0	961	427		
Proportion of heavy vehicles, P <sub>HV</sub>	3	--	--	3	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	126	0	536	0	0	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	136	0	582	0	0	0		
Proportion of heavy vehicles, P <sub>HV</sub>	3	3	3	3	3	3		
Percent grade (%)	0			0				
Flared approach		Y			N			
Storage		2			0			
RT Channelized?			0			0		
Lanes	0	1	0	0	0	0		
Configuration		LTR						
<b>Control Delay, Queue Length, Level of Service</b>								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR				
Volume, v (vph)	163			718				
Capacity, c <sub>m</sub> (vph)	490			126				
v/c ratio	0.33			5.70				
Queue length (95%)	1.44			77.48				
Control Delay (s/veh)	16.0			2182				
LOS	C			F				
Approach delay (s/veh)	--	--	2182					
Approach LOS	--	--	F					

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	B. Morton			Intersection	River Rd & I-84 EB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Existing 2006			
Analysis Time Period	4:30 pm							
<b>Project Description</b>								
East/West Street: River Road				North/South Street: I-84 EB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	0	119	43	31	148	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	129	46	33	160	0		
Proportion of heavy vehicles, P <sub>HV</sub>	5	--	--	6	--	--		
Median type	Undivided							
RT Channelized?			0				0	
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	0	0	0	9	1	137		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	0	0	0	9	1	148		
Proportion of heavy vehicles, P <sub>HV</sub>	2	2	2	7	7	7		
Percent grade (%)		0			0			
Flared approach		N			Y			
Storage		0			6			
RT Channelized?			0			0		
Lanes	0	0	0	0	1	0		
Configuration					LTR			
<b>Control Delay, Queue Length, Level of Service</b>								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L					LTR	
Volume, v (vph)		33					158	
Capacity, c <sub>m</sub> (vph)		1378					931	
v/c ratio		0.02					0.17	
Queue length (95%)		0.07					0.61	
Control Delay (s/veh)		7.7					10.0	
LOS		A					B	
Approach delay (s/veh)	--	--					10.0	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	B. Morton			Intersection	River Rd & I-84 WB			
Agency/Co.				Jurisdiction				
Date Performed	05/16/2006			Analysis Year	Existing 2006			
Analysis Time Period	4:30 pm							
Project Description								
East/West Street: River Road				North/South Street: I-84 WB				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	109	27	0	0	85	32		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	118	29	0	0	92	34		
Proportion of heavy vehicles, P <sub>HV</sub>	11	--	--	17	--	--		
Median type	Undivided							
RT Channelized?			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	92	0	2	0	0	0		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate (veh/h)	99	0	2	0	0	0		
Proportion of heavy vehicles, P <sub>HV</sub>	6	6	6	2	2	2		
Percent grade (%)	0			0				
Flared approach		Y			N			
Storage		2			0			
RT Channelized?			0			0		
Lanes	0	1	0	0	0	0		
Configuration		LTR						
<b>Control Delay, Queue Length, Level of Service</b>								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L			LTR				
Volume, v (vph)	118			101				
Capacity, c <sub>m</sub> (vph)	1406			578				
v/c ratio	0.08			0.17				
Queue length (95%)	0.27			0.63				
Control Delay (s/veh)	7.8			12.6				
LOS	A			B				
Approach delay (s/veh)	--	--		12.6				
Approach LOS	--	--		B				

**City of The Dalles  
Staff Report**

**Variance No. 108-06  
Adjustment No. 06-003  
Minor Partition No. 246-06  
Property Line Adjustment No. 150-06  
Site Plan Review No. 335-06**

**Kase Limmeroth**

Prepared by: Dick Gassman, Senior Planner *DG*

Procedure Type: Quasi-Judicial

Hearing Date: June 1, 2006

Assessor's Map: Township 1 North, Range 13 East, Map 3CC, tax lots 9500 and 9800

Address: 418 East 14<sup>th</sup> Street

Comprehensive Plan  
Designation: "RH" Residential Medium High Density

Zoning District: "RH" Residential Medium High Density

City Limits: Inside

Request: To build three townhouse units on two lots with a total width of 75 feet. The variance is requested to allow lots less than 28 feet in width, the adjustment is requested for a reduction in the front yard setback, the minor partition is to create three lots out of two, the property line adjustment is to move an existing property line, and the site plan review is required by the Land Use and Development Ordinance (LUDO) when single family attached dwellings are proposed in the RH zone.

## **BACKGROUND INFORMATION**

The subject property consists of two vacant lots on the south side of East 14<sup>th</sup> Street, including the remains of a recently demolished dwelling. For convenience purposes I have included a map of the property with the proposed changes. This property was before the Planning Commission previously when the applicant sought a variance to the lot width, at that time planning on building four townhouse units. The applicant now would like to construct three townhouse units. Some of the same issues apply, but since this is a new application, it must be brought back to the Commission.

The minimum width for townhouse lots in this zone is 28 feet. The property has a total of 10,000 square feet, but only 75 feet of width. The applicant proposes two lots of 26 feet 8 inches and one lot of 21 feet 8 inches. The standard front yard setback for lots in this zone is 20 feet. Due to the slope the applicant is seeking a reduction in the front yard setback from 20 feet to 14 feet.

One of the current lots is 25 feet in width, the other 50 feet. By adjusting a property line and dividing one lot, the requested three lots can be created. The basic proposal is dependant on the approval of the variance for the lot width. If that is approved, the minor partition and property line adjustment can be approved. Those issues are considered in the first part of the staff report.

The adjustment to the front yard setback is a separate issue. That decision and other site plan review issues are included in the second part of this staff report.

This variance request is being processed simultaneously with Minor Partition application MIP 256-06, Property Line Adjustment 150-06, Adjustment 06-003, and Site Plan Review SPR 335-06, all of which are normally administrative decisions processed at the staff level. Since this proposal as presented depends on the variance approval, all of the applications are being processed together.

## **NOTIFICATION**

Property owners within 300 feet, City Departments, franchise utilities, Mid-Columbia Fire & Rescue, Wasco County Health Department, and State Building Codes were mailed a notice on May 18, 2006. A notice of public hearing was published in the Dalles Chronicle on May 21, 2006.

## **COMMENTS**

As of the date of the preparation of this staff report, no public comments had been received. A site team review was held on April 6, 2006. At that time the applicant was informed that a variance would be necessary for the lot width approval, and that the applications could be combined for review purposes.

## RECOMMENDATION

Approval of the variance application, with conditions, based upon the findings-of-fact for the variance. Approval of a modified adjustment request based on the findings for the adjustment. Approval of the other applications, with conditions.

### **PART ONE – Variance, minor partition, and property line adjustment.**

#### **A. LAND USE AND DEVELOPMENT ORDINANCE 98-1222**

##### **Section 3.010.040 Applications**

###### **B. Completeness.**

**FINDING A-1:** The application was found to be complete on May 17, 2006. The 120-day State mandated decision deadline is September 14, 2006. The hearing is within the required time.

##### **Section 3.020.050 Quasi-Judicial Actions**

###### **A. Decision types. 4. Variances:**

**FINDING A-2:** This application is for a Variance per section 3.070. Variances are processed as quasi-judicial hearings per section 3.070.020. B. Criterion met.

**B. Staff Report.** The Director shall prepare and sign a staff report for each quasi-judicial action, which identifies the criteria and standards applying to the application and summarizes the basic findings of fact. The staff report may also include a recommendation for approval with conditions, or denial.

**FINDING A-3:** The staff report will detail criteria and standards relevant to a decision, all facts will be stated, and explanations given. This will be detailed through a series of findings directly related to relevant sections and subsections of the ordinance as they relate to this request. Criterion met.

**C. Public Hearings.** The quasi-judicial process requires a public hearing within 45 days from the date the application is deemed complete. The application was deemed complete on May 17, 2006. The 45 day period ends on July 1, 2006.

**FINDING A-4:** The public hearing is scheduled for June 1, 2006. Criterion met.

###### **D. Notice of Hearing.**

**FINDING A-5.** Appropriate mailings to property owners within 300 feet and notice to affected departments and agencies were made on May 17, 2006. Criterion met.

##### **Section 3.070.020 Review Procedures**

**A. Applications.** Variance applications shall be accompanied by at least 15 copies of the concept site plan, and a written statement which specifically addresses the review criteria.

**FINDING A-6:** The required plans and written statement have been submitted. Criterion met.

### **Section 3.070.030 Review Criteria**

A variance to the requirements of this Ordinance shall be granted only in the event that each of the following circumstances is found to exist:

**A.** The proposed variance will not be contrary to the purposes of this Ordinance, policies of the Comprehensive Plan, or any other applicable policies and standards adopted by the City.

**FINDING A-7:** In the RH zone, lots of 10,000 square feet are allowed a total of four units. The combined square footage of these two lots is 10,000 square feet. The owner is entitled to a total of four dwelling units, but is seeking approval for a total of three units. Granting this variance to accommodate less than the number of units allowed is not contrary to the policies of the City. Criterion met.

**B.** Exceptional or extraordinary circumstances apply to the subject property which do not apply generally to other property in the same zone or vicinity. Such circumstances are a result of lot size or shape, topography, or circumstances over which the applicant has no control.

**FINDING A-8:** As stated above, the total square footage allows four dwelling units. If the applicant chose to build four apartment units, or even four condominium units, no variance would be needed. The applicant would like to construct townhouses. Townhouses require their own separate lot. In order to build three similar units of 21 feet 8 inches in width, and use the rowhouse provisions with zero lot lines for the interior lots while maintaining the required side yard setbacks, the applicant is seeking this variance. The extraordinary circumstances are the odd shape of the lot and the combination of lot width and townhouse property requirements. Criterion met.

**C.** The variance is necessary for the preservation of a property right of the applicant which is substantially the same as owners of other property in the same zone or vicinity.

**FINDING A-9:** Without the variance the applicant would not be able to build to the density allowed in this manner. If our code allows four units on these lots, and the applicant would not need a variance for a four unit apartment house, or a four unit condominium development, our code should be flexible enough to allow for a three unit townhouse development. The variance process provides that flexibility. Criterion met.

**D.** The conditions or circumstances justifying the variance have not been willfully or purposely self-imposed, and do not result from a violation of this Ordinance since its effective date.

**FINDING A-10:** The code language that prevents the development of the townhouses are imposed by the City regulations and not by the applicant. The odd shape of the lots is a contributing factor. Criterion met.

**E.** The proposed variance will not substantially reduce the amount of privacy enjoyed by users of neighboring land uses if the variance were not allowed.

**FINDING A –11:** The owner has the right to build four units on the property. Denying this variance would arguably not change the number of units, nor the design, only the type of ownership. The same structures could be built without the variance. Criterion met.

F. The proposed variance is the minimum variance which would alleviate the difficulty.

**FINDING A – 12:** The proposed variance is the minimum variance to alleviate the difficulty. Criterion met.

## **PART TWO – Site Plan Review and Adjustment.**

### **Section 3.030.040 Review Criteria (Site Plan Review)**

Site Plan Review application shall be reviewed to assure consistency with the state statutes, the Comprehensive Plan, this and other City Ordinance, and the applicable provisions of Chapter 5: Zone District Regulations, Chapter 6: General Regulations, Chapter 7: Parking Standards, Chapter 8: Physical and Environmental Constraints, Chapter 9: Land Divisions, and Chapter 10: Improvements Required with Development.

#### **1. Chapter 5: Zone District Regulations.**

**FINDING A-13:** The use of the proposed development meets minimum standards of Chapter 5, if the variance and adjustment are approved. Section 5.020.020. A. 1. a) allows attached single family dwellings (duplexes) in the RH zone subject to site plan review. Criterion met.

#### **2. Chapter 6: General Regulations.**

- a. 6.010.070: Landscaping. In the RH zone landscaping is regulated by 6.010.020 which requires landscaping in the first 15 feet of the front yard.
- b. 6.050: Access Management. This property will have 12 foot driveways.

**FINDING A-14:** Landscaping will be required for front yard areas not developed with driveways. Access is not an issue. Criterion met with conditions.

#### **3. Chapter 7: Parking.** The parking provisions for single family dwellings in Section 7.060 require a minimum of two parking spaces. The applicant has indicated two parking spaces in the garage, in tandem. Stacking of parking spaces is allowed for single family dwellings. All parking areas and driveways shall be paved.

**FINDING A-15:** Parking areas for vehicle parking requirements as indicated are adequate. Criterion met.

#### **4. Chapter 8: Physical and Environmental Constraints.** The land is located in geologic hazard area A2. Section 8.040.030 requires a geologic hazard study

for this type of development, prior to any development. A physical constraints permit is also required.

**FINDING A-16:** A geologic hazard study will be a condition of approval. A physical constraints permit will also be required for any development. Criterion met conditionally.

**5. Chapter 10: Improvements Required with Development**

a. East 14<sup>th</sup> Street is fully developed. All necessary utilities are available.

**FINDING A-17:** Chapter 10 requirements are complete when each lot has a complete set of utilities provided. This will be a condition of approval. Criterion met.

**Section 3.080.040 Review Criteria (Adjustment)**

A. An adjustment will be approved if the review body finds that the applicant has shown that either approval criteria 1 through 5 or 6 through 8 below, has been met.

1. If in a residential zone, show that the proposal will not significantly detract from the livability or appearance of the residential area.
2. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project which is still consistent with the overall purpose of the zone.
3. City designated scenic resources and historic resources are preserved.
4. Any impacts resulting from the adjustment are mitigated to the extent practical.
5. If in an environmental sensitive area, the proposal has as few detrimental environmental impacts on the resource and resource values as is practicable.

Or

6. Application of the regulation in question would preclude all reasonable economic use of the site.
7. Granting the adjustment is the minimum necessary to allow the use of the site.
8. Any impacts resulting from the adjustment are mitigated to the extent practical.

**FINDING A-18:** The proposal will not significantly detract from the livability or appearance of the area. Only one adjustment per lot is being requested. Neither scenic nor historic resources are involved and there are no environmental impacts. If anything, granting the adjustment would reduce the amount of excavation needed. On item #4, there is one impact that needs mitigation. If the adjustment is approved, there will be a driveway of 14 feet from the edge of the structure to the property line adjacent to the sidewalk. This will present itself as a possible parking space and invite occupants or visitors to park there. However the most likely result if used for parking is that a vehicle will extend across the sidewalk and perhaps even into the street, creating a possible safety issue and an enforcement issue. Staff has consistently required driveways to be a

minimum of 20 feet in length to avoid this problem. Staff cannot recommend the 14 foot driveway. A minimum of 18 feet is recommended.

If the Commission wishes to avoid the extensive amount of excavation that will be involved to provide an 18 foot setback, an alternative is to allow a reduced setback of 10 feet. Section 3.080.020. D. 1 allows a setback reduction of up to 50%, in this case to 10 feet. Such a reduction would reduce the excavation substantially yet would not be as attractive for a parking space. If this option is selected, staff recommends that each property owner be required to post a sign suitable to the City that states it is a violation to block the sidewalk with a vehicle. Criterion met conditionally.

B. Additional Criteria. If the applicant meets the approval criteria above, then the Approving Authority may also take into consideration, when applicable, whether the proposal will:

1. Result in a more efficient use of the site.
2. Provide adequate provisions of light, air, and privacy to adjoining property.
3. Provide for accessibility, including emergency vehicles, per City standards.
4. Result in a structure that conforms to the general character of the neighborhood or zone district.
5. If a reduced number of parking is requested, provide adequate parking based on low demand users, or supplement on-site parking with joint use agreements.

**FINDING A-19:** A reduced setback would be a more efficient use of the site allowing for reduced excavation. It would provide adequate light and air and for accessibility for vehicles. The structure would still conform to the general character of the neighborhood, although it will be closer to the street than its adjacent neighbors. There are structures in the general neighborhood that are this close to the street. Criteria met.

## **B. Comprehensive Plan**

The Comprehensive Plan was adopted in 1994.

**FINDING B – 1.** There is nothing in these applications that would be in conflict with provisions of the Comprehensive Plan. Criterion met.

## **IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE VARIANCE APPLICATION:**

1. Completion of the related minor partition, and property line adjustment.
2. Completion of a three unit townhouse development similar to that proposed in the related site plan review application.
3. All development must be completed in accordance with Land Use and Development Ordinance 98-1222.

Additional criteria for the minor partition application:

**IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE MINOR PARTITION AND PROPERTY LINE ADJUSTMENT APPLICATIONS:**

1. Final plat submission will have to meet all the requirements outlined in the LUDO.
2. All utilities will have to be provided to each lot.

**IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE SITE PLAN REVIEW APPLICATIONS:**

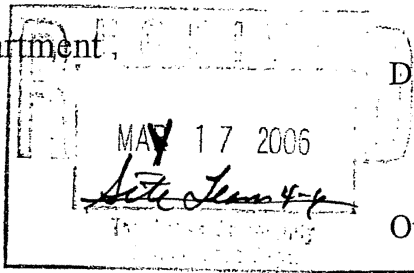
1. All development must be completed in accordance with Land Use and Development Ordinance 98-1222.
2. System Development Charges for sanitary sewer and water will be required at the time of construction.
3. New driveways and approaches will be required to be paved. Driveways if used for parking must be a minimum of 18 feet in length.
4. Parking is required to be two spaces per unit.
5. A geological hazard study must be submitted prior to any development. A physical constraints permit will be required for any cut or fill. If cut and fill exceeds 250 cubic yards, an engineer report will also be required.
6. Landscaping is required in the first 15 feet of the front yard not otherwise developed.
7. If irrigation is provided, a backflow device is required.

**IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE ADJUSTMENT REQUEST:**

1. If allowed front yard setback is less than 18 feet, provide signs suitable to the City stating it is a violation to block the sidewalk with a vehicle.

VARIANCE APPLICATION

CITY OF THE DALLES  
Community Development Department  
313 Court Street  
The Dalles, OR 97058  
(541) 296-5481, ext. 1125  
Fax (541) 298-5490



Date Filed 5-17-06  
File# MAR 108-06  
Date Deemed Complete \_\_\_\_\_  
Hearing Date \_\_\_\_\_  
Approval Date \_\_\_\_\_  
Permit Log # \_\_\_\_\_  
Other Cross Reference# \_\_\_\_\_

APPLICANT

Name Kase F. Limmeroth  
Address P.O. Box 1276  
The Dalles, OR 97058  
Telephone # 541-296-9331  
541-980-2442

LEGAL OWNER (If Different than Applicant)

Name Same  
Address \_\_\_\_\_  
Telephone # \_\_\_\_\_

\*If applicant is not the legal owner, attach either [1] owner consent letter, or, [2] copy of earnest money agreement, or, [3] copy of lease agreement.

PROPERTY INFORMATION

Address 418 East 19th Street  
Map and Tax Lot IN 13E 3CC tax lot 9800 + 9500  
Size of Development Site 23 24  
Zone District/Overlay RH  
Comprehensive Plan Designation RH / A2

REQUEST

New Construction     Expansion/Alteration     Change of Use     Amend Approved Plan

Brief Explanation: TOWN HOUSE'S 3- 12' wide driveways, narrow lots

**JUSTIFICATION OF REQUEST**

1. What are the special circumstances (size, shape or topography of lot, location of surroundings) that do not apply to other properties in the same vicinity and zone?

LOT IS SLIGHTLY NARROWER THAN ALLOWABLE  
MINIMUM FRONTAGE REQUIREMENT

2. What difficulties and unnecessary hardships will be created without a variance to the Ordinance?

WE WILL BE UNABLE TO BUILD THESE UNITS  
& SELL THEM INDIVIDUALLY

3. Explain why the variance will not be detrimental to the public safety, health and welfare.

THERE IS AMPLE OFF-STREET PARKING & ALL SERVICES  
WILL BE IN HANDICAP WITH CODES.

4. Explain why this variance, if granted, would not be contrary to the intent of the Zoning Ordinance.

WE ARE CREATING ATTRACTIVE & NEEDED  
IPFW.

**PARKING INFORMATION**

Total Number of Spaces Proposed 2/UNIT Total Number of Handicap Spaces Proposed \_\_\_\_\_

Total Number of Compact Spaces Proposed \_\_\_\_\_ What material will be used for the surface of the parking area CONCRETE SA HA

**LANDSCAPING INFORMATION**

Total Square Footage Landscaping Proposed 1400sqft/UNIT Percent of Landscaping Irrigated 100%

**ECONOMIC DEVELOPMENT INFORMATION**

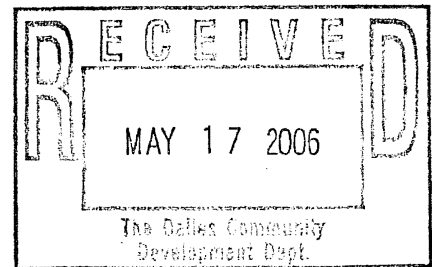
Proposed Project is located in the Enterprise Zone

\_\_\_\_\_ Full Time Equivalent (FTE) jobs are currently provided.

\_\_\_\_\_ FTE jobs are expected to be created by the proposed project.

To Whom it may concern:

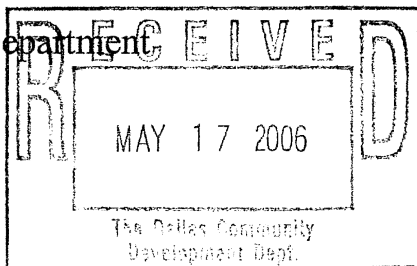
We are requesting a reduction in setback for the units on East 14<sup>th</sup> St. from 20 feet to 14 feet. The lot is steeply sloping and the full setback would require extensive and prohibitive excavation. We understand the need for adequate parking, and have created a 2 car garage for each unit, eliminating or greatly reducing the need for outside parking. Even so, the 14 foot setback is adequate to park a compact vehicle without infringing upon the sidewalk.



ADJUSTMENT APPLICATION

Limmeroth -  
Setback

CITY OF THE DALLES  
Community Development Department  
313 Court Street  
The Dalles, OR 97058  
(541) 296-5481, ext. 1125  
Fax (541) 298-5490  
[www.ci.the-dalles.or.us](http://www.ci.the-dalles.or.us)



Date Filed ADJ-06-003  
File# 5-17-06  
Date Deemed Complete \_\_\_\_\_  
Hearing Date \_\_\_\_\_  
Approval Date \_\_\_\_\_  
Permit Log # \_\_\_\_\_  
Other Cross Reference# \_\_\_\_\_

APPLICANT

Name KASE LIMMEROTH

Address P.O. Box 1276  
THE DALLES, OR 97058

Telephone # 541-296-9331

E-Mail KASEL@GOLDS.NET

LEGAL OWNER (If Different than Applicant)

Name same

Address \_\_\_\_\_

Telephone # \_\_\_\_\_

E-Mail \_\_\_\_\_

\*If applicant is not the legal owner, attach either [1] owner consent letter, or; [2] copy of earnest money agreement, or; [3] copy of lease agreement.

PROPERTY INFORMATION

Address 418 E. 14th ST.

Map and Tax Lot 1N 13E 3cc tax lot 9800 + 9500

Size of Development Site 0.13 .24

Zone District/Overlay RH

Comprehensive Plan Designation RH/A2

REQUEST

New Construction     Expansion/Alteration     Change of Use     Amend Approved Plan

Brief Explanation: TOWNHOUSES - REQUESTING A SETBACK ADJUSTMENT  
REDUCTION OF 1/3. THE USUAL SETBACK IS 20' & WE  
WOULD LIKE TO GO 14'.

# JUSTIFICATION OF REQUEST

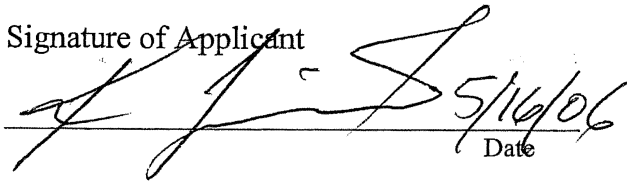
Review Criteria for Adjustments are found in LUDO Section 3.080.040

For approval the applicant must satisfy the criteria in EITHER Section A or Section B. On a separate piece of paper provide sufficient information for the review body to determine each of the issues listed in the section chosen. The information may be written, photographic, or any other method which will provide useful information to the review body. Except for the application, information may be sent by fax or E-mail.

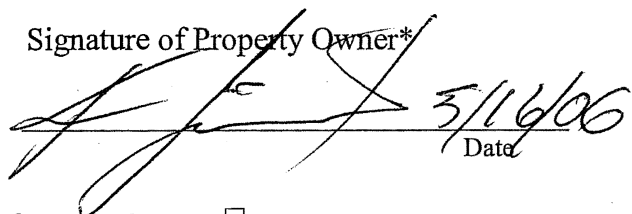
- A.
  - 1. If in a residential zone, show that the proposal will not significantly detract from the livability or appearance of the residential area.
  - 2. If more than one adjustment is being requested, the cumulative affect of the adjustments results in a project which is still consistent with the overall purpose of the zone.
  - 3. City designated scenic resources and historic resources are preserved.
  - 4. Any impacts resulting from the adjustment are mitigated to the extent practical.
  - 5. If in an environmental sensitive area, the proposal has as few detrimental environmental impacts on the resource and resource values as is practicable.
  
- B.
  - 1. Application of the regulation in question would preclude all reasonable economic use of the site.
  - 2. Granting the adjustment is the minimum necessary to allow the use of the site.
  - 3. Any impacts resulting from the adjustment are mitigated to the extent practical.
  
- C. If the applicant meets the approval criteria under either Section A or Section B, the review body may also take into consideration, when applicable, whether the proposal will:
  - 1. Result in a more efficient use of the site.
  - 2. Provide adequate provisions of light, air, and privacy to adjoining property.
  - 3. Provide for accessibility, including emergency vehicles, per City standards.
  - 4. Result in a structure that conforms to the general character of the neighborhood or zone district.
  - 5. If a reduced number of parking is requested, provide adequate parking based on low demand users, or supplement on-site parking with joint use agreements.(The applicant may also provide comments on any of the issues in part C. )

There are no mandatory plans or other types of information required with this application. It is the applicant's responsibility to provide sufficient information and documentation on each of the issues for the review body to make a decision. Insufficient justification will result in a denial.

Signature of Applicant

  
Date 5/16/06

Signature of Property Owner\*

  
Date 5/16/06

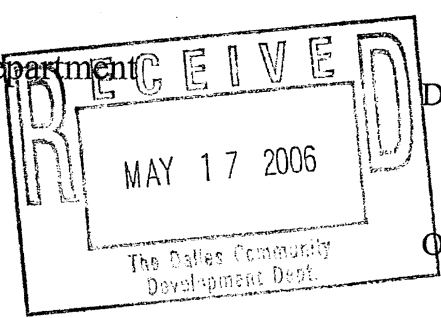
\* Notarized Owner Consent Letter may substitute for signature of property Owner

Limmeroth - Buildings

**SITE PLAN REVIEW APPLICATION**

Fee \$275<sup>00</sup>

CITY OF THE DALLES  
Community Development Department  
313 Court Street  
The Dalles, OR 97058  
(541) 296-5481, ext. 1125  
Fax (541) 298-5490  
www.ci.the-dalles.or.us



Date Filed 5-17-06  
File# SPR 335-06  
Date Deemed Complete 5-17-06  
Hearing Date 6-1-06  
Approval Date \_\_\_\_\_  
Permit Log # \_\_\_\_\_  
Other Cross Reference# \_\_\_\_\_

**APPLICANT**

**LEGAL OWNER (If Different than Applicant)**

Name KASE LIMMEROTH  
Address P.O. Box 1276  
THE DALLES OR 97058  
Telephone # 541.296.9331

Name SAME  
Address \_\_\_\_\_  
Telephone # \_\_\_\_\_

**PROPERTY INFORMATION**

Address 418 E, 14TH ST.  
Map and Tax Lot 1N 13E 3cc taxlot 9800 & 9500  
Size of Development Site .24  
Zone District/Overlay RH In City Limits: Yes X No \_\_\_\_\_  
Comprehensive Plan Designation RH Geohazard Zone: A2

**PROJECT INFORMATION**

New Construction     Expansion/Alteration     Change of Use     Amend Approved Plan  
Current Use of Property RESIDENCE  
Proposed Use of Property RESIDENCE

Briefly Explain the Project BUILDING 3 SINGLE FAMILY

TOWN HOMES

40-255 AVE  
38-71-2

**PROPOSED BUILDING(S) FOOTPRINT SIZE (in square feet)** 2700 (900/UNIT)

**PARKING INFORMATION**

Total Number of Spaces Proposed 6(2/UNIT)

Square Footage of Parking Lot Landscaping Proposed \_\_\_\_\_

**LANDSCAPING INFORMATION**

Total Square Footage Landscaping Proposed 1400 sq/UNIT Percent of Landscaping Irrigated 100%

**ECONOMIC DEVELOPMENT INFORMATION**

Proposed Project is located in the Enterprise Zone

\_\_\_\_\_ Full Time Equivalent (FTE) jobs are currently provided.

\_\_\_\_\_ FTE jobs are expected to be created by the proposed project.

Signature of Applicant

Signature of Property Owner\* or Owners Agent

[Signature]  
Date 5/16/06

[Signature]  
Date 5/16/06

\* Notarized Owner Consent Letter may substitute for signature of property Owner

**NOTE:** This application must be accompanied by the information required in Section 3.030: Site Plan Review, contained in Ordinance No. 98-1222, The City of The Dalles Land Use and Development Ordinance.

**PLANS SUBMITTED:**

At least 15 copies of concept site plan.

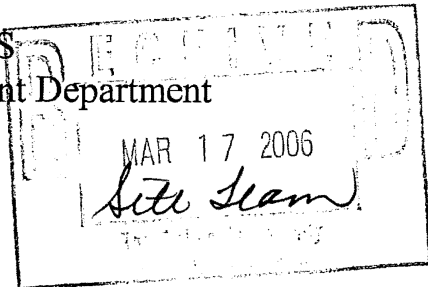
At least one 11 x 17 concept site plan.

4 copies detailed landscape plans

4 copies construction detail plans

MINOR PARTITION APPLICATION

CITY OF THE DALLES  
Community Development Department  
313 Court Street  
The Dalles, OR 97058  
(541) 296-5481, ext. 1125  
Fax (541) 298-5490



Date Filed MIP 256-06  
File# \_\_\_\_\_  
Date Deemed Complete \_\_\_\_\_  
Hearing Date \_\_\_\_\_  
Approval Date \_\_\_\_\_  
Permit Log # \_\_\_\_\_  
Other Cross Reference# \_\_\_\_\_

APPLICANT

Name Kase F. Kimmeroth  
Address P.O. Box 1274  
The Dalles, OR 97058  
Telephone # 541-296-9331  
541-980-2442

LEGAL OWNER (If Different than Applicant)

Name Same  
Address \_\_\_\_\_  
Telephone # \_\_\_\_\_

PROPERTY INFORMATION

Address 418 East 14th Street  
Map and Tax Lot IN 13E 3CC tax lot 9800 + 9500  
Size of Development Site 1.13 acres  
Zone District/Overlay RH In City Limits: Yes  No   
Comprehensive Plan Designation RH Geohazard Zone: A2

PROJECT INFORMATION

Current Use of Property Residence  
Proposed Use of Property Approved 3 townhouses. Want to partition  
into 3 smaller lots with a PLD.

Signature of Applicant

Signature of Property Owner\* or Owners Agent

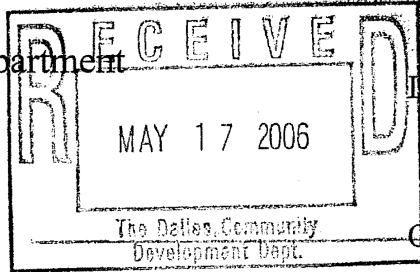
[Signature]  
Date 3/19/06

\_\_\_\_\_  
Date

\* Notarized Owner Consent Letter may substitute for signature of property Owner

Property Line Adjustment Application

CITY OF THE DALLES  
Community Development Department  
313 Court Street  
The Dalles, OR 97058  
(541) 296-5481, ext. 125  
Fax (541) 298-5490



Date Filed \_\_\_\_\_  
File# PLA 150-06  
Date Deemed Complete \_\_\_\_\_  
Hearing Date \_\_\_\_\_  
Approval Date \_\_\_\_\_  
Permit Log # \_\_\_\_\_  
Other Cross Reference# \_\_\_\_\_

APPLICANT/LEGAL OWNER PARCEL 1

Name Kase F. Limmeroth  
Address P.O. Box 1276  
The Dalles, OR 97058  
Telephone # 541-296-9331  
541-980-2442

APPLICANT/LEGAL OWNER PARCEL 2

Name Same  
Address \_\_\_\_\_  
Telephone # \_\_\_\_\_

PROPERTY INFORMATION

Address 418 East 14th Street  
Map and Tax Lot N 13E 3CC tax lot 9500 + 9800  
Zone District/Overlay RH In City Limits: Yes  No \_\_\_\_\_  
Square Footage: Current Parcel #1 \_\_\_\_\_; Current Parcel #2 \_\_\_\_\_; Current Parcel #3 \_\_\_\_\_

GENERAL INFORMATION

Describe current use of the property Residence - remove + do a partition with PLA

REQUEST:

Proposed square footage: Parcel #1 \_\_\_\_\_; Parcel #2 \_\_\_\_\_; Parcel #3 \_\_\_\_\_

NOTE: Attach 4 copies of the preliminary plan, drawn to scale, with dimensions of the proposed parcels, existing buildings, setbacks, and significant land features. Indicate current and proposed parcel numbers on plan.

Signature of Applicant(s)  
[Signature]

Signature of Property Owner(s) or Agent  
[Signature]  
PLANNING APPROVAL: \_\_\_\_\_

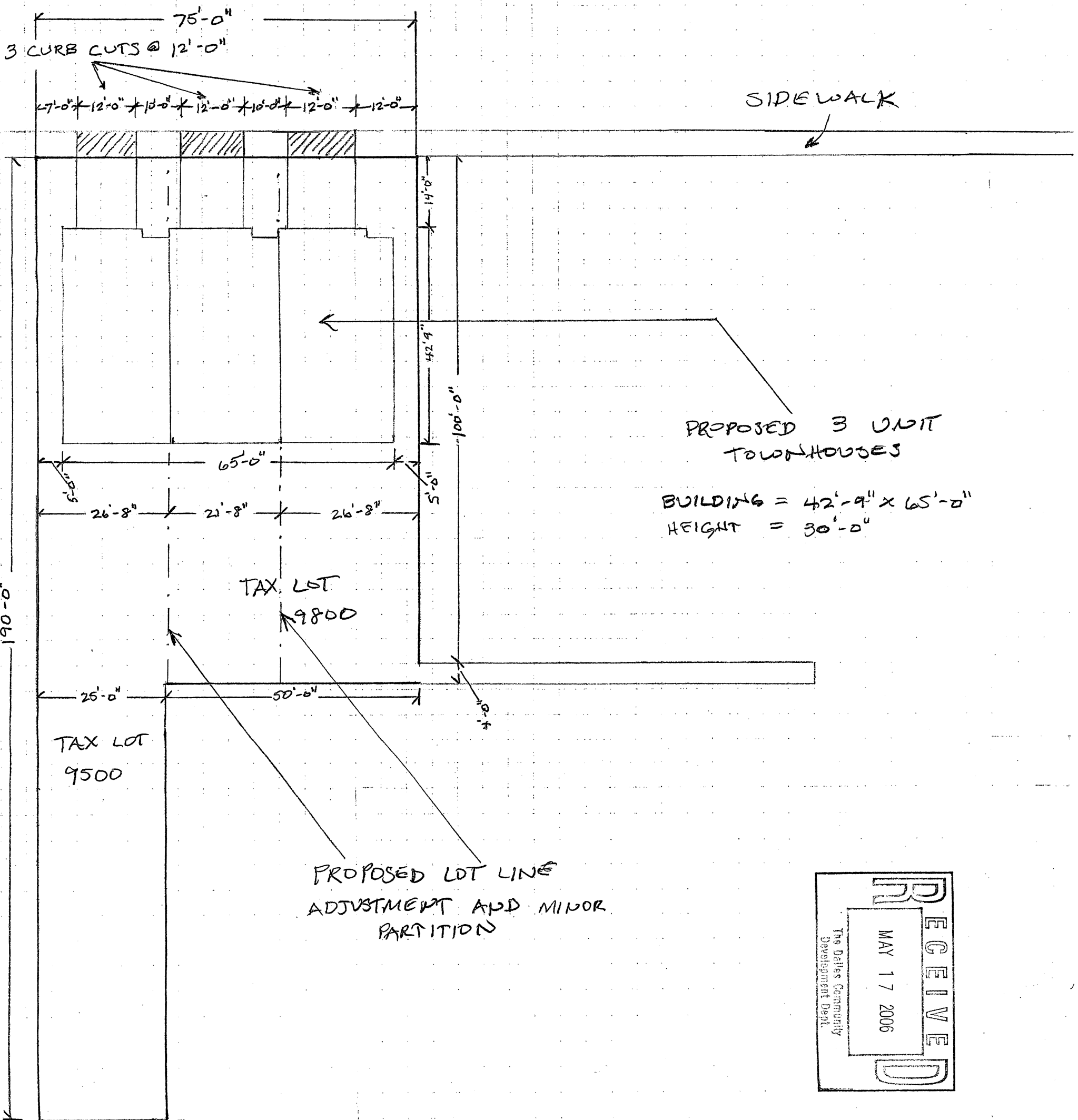
APRIL 6, 2006

PROJECT NAME = 14<sup>TH</sup> STREET TOWNHOMES

SCALE: 1" = 20'

EAST 14<sup>TH</sup> STREET

LAUGHLIN STREET



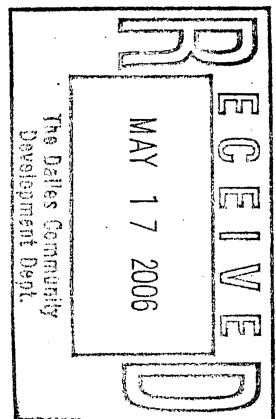
PROPOSED 3 UNIT  
TOWNHOUSES

BUILDING = 42'-9" X 65'-0"  
HEIGHT = 30'-0"

TAX LOT  
9800

TAX LOT  
9500

PROPOSED LOT LINE  
ADJUSTMENT AND MINOR  
PARTITION



## **RESOLUTION NO. P.C. 460-06**

Adopting Variance No. 108-06, Adjustment No. 06-003, Minor Partition No. 246-06, Property Line Adjustment No. 150-06, Site Plan Review No. 335-06 of Kase Limmeroth to build three townhouse units on two lots with a total width of 75 feet. The variance is requested to allow lots less than 28 feet in width, the adjustment is requested for a reduction in the front yard setback, the minor partition is to create three lots out of two, the property line adjustment is to move an existing property line, and the site plan review is required by the Land Use and Development Ordinance (LUDO) when single family attached dwellings are proposed in the RH zone.

### **RECITALS:**

- A.** The Planning Commission of the City of The Dalles has on June 1, 2006 conducted a public hearing to consider the above request for property located at 418 E. 14<sup>th</sup> Street that is further described as 1N 13E 3 CC tax lots 9500 and 9800. Property is zoned "RH" – Residential High-Medium Density. A staff report was presented, stating the findings of fact, conclusions of law, and a staff recommendation.
- B.** Staff's report of Variance No. 108-06, Adjustment No. 06-003, Minor Partition No. 246-06, Property Line Adjustment No. 150-06, Site Plan Review No. 335-06 and the minutes of the June 1, 2006 Planning Commission meeting, upon approval, provide the basis for this resolution and are incorporated herein by reference.

### **II. RESOLUTION:**

Now, therefore, be it FOUND, DETERMINED, and RESOLVED by the Planning Commission of the City of The Dalles as follows:

- A.** In all respects as set forth in Recitals, Part "I" of this resolution.
- B.** Variance No. 108-06, Adjustment No. 06-003, Minor Partition No. 246-06, Property Line Adjustment No. 150-06, Site Plan Review No. 335-06 are hereby approved with the following conditions:

1. Completion of the related minor partition, and property line adjustment.
2. Completion of a three unit townhouse development similar to that proposed in the related site plan review application.
3. All development must be completed in accordance with Land Use and Development Ordinance 98-1222.

Additional criteria for the minor partition application:

### **IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE MINOR PARTITION AND PROPERTY LINE ADJUSTMENT APPLICATIONS:**

1. Final plat submission will have to meet all the requirements outlined in the LUDO.
2. All utilities will have to be provided to each lot.

**IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE SITE PLAN REVIEW APPLICATIONS:**

1. All development must be completed in accordance with Land Use and Development Ordinance 98-1222.
2. System Development Charges for sanitary sewer and water will be required at the time of construction.
3. New driveways and approaches will be required to be paved. Driveways if used for parking must be a minimum of 18 feet in length.
4. Parking is required to be two spaces per unit.
5. A geological hazard study must be submitted prior to any development. A physical constraints permit will be required for any cut or fill. If cut and fill exceeds 250 cubic yards, an engineer report will also be required.
6. Landscaping is required in the first 15 feet of the front yard not otherwise developed.
7. If irrigation is provided, a backflow device is required.

**IF APPROVED, RECOMMENDED CONDITIONS OF APPROVAL FOR THE ADJUSTMENT REQUEST:**

1. If allowed front yard setback is less than 18 feet, provide signs suitable to the City, stating it is a violation to block the sidewalk with a vehicle.

**2. 1. APPEALS, COMPLIANCE, AND PENALTIES**

- a. Any party of record may appeal a decision of the Planning Commission to the City Council for review. Appeals must be made according to Section 3.020.080 of the Land Use and Development Ordinance, and must be filed with the City Clerk within ten (10) days of the date of mailing of this resolution.
- b. Failure to exercise this approval within the time limits set either by resolution or by ordinance will invalidate this permit.
- c. All conditions of approval must be met within the time limits set by this resolution or by ordinance. Failure to meet any condition will prompt enforcement proceedings that can result in: 1) permit revocation; 2) fines of up to \$500.00 per day for the violation period; 3) a civil proceeding seeking injunctive relief.

The Secretary of the Commission shall (a) certify to the adoption of the Resolution; (b) transmit a copy of the Resolution along with a stamped approved/denied site plan or plat to the applicant.

APPROVED AND ADOPTED THIS 1<sup>st</sup> DAY OF JUNE 2006

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Bruce Lavier, Chairman  
Planning Commission

I, Dan Durow, Community Development Director for the City of The Dalles, hereby certify that the foregoing Resolution was adopted at the regular meeting of the City Planning Commission, held on the 1<sup>st</sup> of June 2006.

AYES:

NAYS:

ABSENT:

ABSTAIN:

ATTEST: \_\_\_\_\_  
Dan Durow, Community Development Director  
City of The Dalles