

AGENDA

REGULAR CITY COUNCIL MEETING

December 14, 2009

5:30 p.m.

WASCO COUNTY COURTHOUSE  
CIRCUIT COURTROOM  
511 WASHINGTON STREET  
THE DALLES, OREGON

1. CALL TO ORDER
2. ROLL CALL OF COUNCIL
3. PLEDGE OF ALLEGIANCE
4. APPROVAL OF AGENDA
5. PRESENTATIONS/PROCLAMATIONS
6. AUDIENCE PARTICIPATION

During this portion of the meeting, anyone may speak on any subject which does not later appear on the agenda. Five minutes per person will be allowed. If a response by the City is requested, the speaker will be referred to the City Manager for further action. The issue may appear on a future meeting agenda for City Council consideration.

7. CITY MANAGER REPORT
8. CITY ATTORNEY REPORT
9. CITY COUNCIL REPORTS
10. CONSENT AGENDA

Items of a routine and non-controversial nature are placed on the Consent Agenda to allow the City Council to spend its time and energy on the important items and issues. Any Councilor may request an item be "pulled" from the Consent Agenda and be considered separately. Items pulled from the Consent Agenda will be placed on the Agenda at the end of the "Action Items" section.



OFFICE OF THE CITY MANAGER

COUNCIL AGENDA

- A. Approval of November 23, 2009 Regular City Council Meeting Minutes
- B. Approval of November 16, 2009 Special City Council Meeting Minutes
- C. Approval of November 16, 2009 Town Hall Meeting Minutes
- D. Resolution No. 09-036 Adopting a Policy for Use of Electronic Messages and Retention of Such Messages for the City Council
- E. Resolution No. 09-039 Concurring With the Mayor's Appointment of Dennis Davis to the Historic Landmarks Commission

11. PUBLIC HEARINGS

- A. Public Hearing to Receive Testimony Regarding Remand of Approval for Site Plan #379-08 of Pacland for the Construction of a Wal-Mart Store [Agenda Staff Report #09-093]

12. ACTION ITEMS

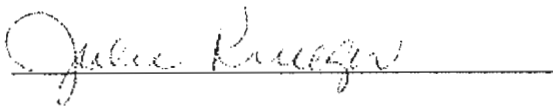
- A. Resolution No. 09-037 Adopting a Supplemental Budget for Fiscal Year 2009-10, Making Appropriations and Authorizing Expenditures From and Within the General Fund, Sewer Special Reserve Fund, Capital Projects Fund and Special Grants Fund [Agenda Staff Report #09-091]
- B. Resolution No. 09-038 Authorizing Transfers of Budget Funds Between Departments and Categories of the Sewer Reserve Fund for the Fiscal Year Ending June 30, 2010 [Agenda Staff Report #09-092]

13. ADJOURNMENT

---

**This meeting conducted in a handicap accessible room.**

Prepared by/  
Julie Krueger, MMC  
City Clerk





**CITY of THE DALLES**

313 COURT STREET  
THE DALLES, OREGON 97058

(541) 296-5481

## **AGENDA STAFF REPORT**

### **CITY OF THE DALLES**

<b>MEETING DATE</b>	<b>AGENDA LOCATION</b>	<b>AGENDA REPORT #</b>
December 14, 2009	Consent Agenda 10, A- E	N/A

**TO:** Honorable Mayor and City Council

**FROM:** Julie Krueger, MMC, City Clerk

**THRU:** Nolan K. Young, City Manager

**DATE:** November 30, 2009

**ISSUE:** Approving items on the Consent Agenda and authorizing City staff to sign contract documents.

**A.     ITEM:** Approval of November 23, 2009 Regular City Council Meeting Minutes.

**BUDGET IMPLICATIONS:** None.

**SYNOPSIS:** The minutes of the November 23, 2009 regular City Council meeting have been prepared and are submitted for review and approval.

**RECOMMENDATION:** That City Council review and approve the minutes of the November 23, 2009 regular City Council meeting.

**B.     ITEM:** Approval of November 16, 2009 Special City Council Meeting Minutes.

**BUDGET IMPLICATIONS:** None.

**SYNOPSIS:** The minutes of the November 16, 2009 special City Council meeting have been prepared and are submitted for review and approval.

**RECOMMENDATION:** That the City Council review and approve the minutes of the November 16, 2009 special City Council meeting.

C. **ITEM:** Approval of the November 16, 2009 Town Hall Meeting Minutes.

**BUDGET IMPLICATIONS:** None.

**SYNOPSIS:** The minutes of the November 16, 2009 Town Hall meeting have been prepared and are submitted for review and approval.

**RECOMMENDATION:** That City Council review and approve the minutes of the November 16, 2009 Town Hall meeting.

D. **ITEM:** Adoption of Resolution No. 09-036, adopting a policy for use of electronic messages and retention of such messages for the City Council.

**BUDGET IMPLICATIONS:** None.

**SYNOPSIS:** As public bodies have increased their use of electronic messages (referred to as e-mail) as a communication tool, the public bodies have been advised to develop a policy for the use of email messages generated by members of the governing body, and for the retention of email messages generated by members of the governing body. City staff has prepared a proposed policy for the City Council, which has been reviewed and approved by the Council. The proposed policy is included as an exhibit for Resolution No. 09-036.

**RECOMMENDATION:** The Council adopt Resolution No. 09-036 as part of the Consent Agenda.

E. **ITEM:** Resolution No. 09-039 Concurring With the Mayor's Appointment of Dennis Davis to the Historic Landmarks Commission.

**BUDGET IMPLICATIONS:** None.

**SYNOPSIS:** The Mayor has selected Dennis Davis to fill an expired term on the Historic Landmarks Commission, term to expire May 31, 2013.

**RECOMMENDATION:** The Council adopt Resolution No. 09-039 concurring with the Mayor's appointment of Dennis Davis to the Historic Landmarks Commission.

## **MINUTES**

REGULAR COUNCIL MEETING  
OF  
NOVEMBER 23, 2009  
5:30 P.M.  
WASCO COUNTY COURTHOUSE  
THE DALLES, OREGON

**PRESIDING:** Mayor Nikki Lesich

**COUNCIL PRESENT:** Bill Dick, Carolyn Wood, Jim Wilcox, Dan Spatz, Brian Ahier

**COUNCIL ABSENT:** None

**STAFF PRESENT:** City Manager Nolan Young, City Attorney Gene Parker, City Clerk Julie Krueger, Senior Planner Dick Gassman, Police Chief Jay Waterbury, Administrative Intern Jared Cobb, Finance Director Kate Mast, Engineer Dale McCabe, Community Development Director Dan Durow, Police Captain Ed Goodman

### **CALL TO ORDER**

Mayor Lesich called the meeting to order at 5:31 p.m.

### **ROLL CALL**

Roll call was conducted by City Clerk Krueger; all Councilors present.

### **PLEDGE OF ALLEGIANCE**

Mayor Lesich invited the audience to join in the Pledge of Allegiance.

### **APPROVAL OF AGENDA**

Mayor Lesich asked the Council to amend the agenda by adding authorization for City Clerk to endorse an OLCC change in ownership application for the Columbia Portage Grill, to the

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 2

It was moved by Wood and seconded by Dick to approve the agenda as amended. The motion carried unanimously.

### **PRESENTATIONS/PROCLAMATIONS**

#### **Audit Presentation**

The annual audit was presented by Rob Tremper of Dickey & Tremper. He highlighted the audit findings, corrected and uncorrected misstatements, and audit issues. Tremper said a clean audit opinion had been provided and that the audit had gone well.

Councilor Spatz asked if Tremper believed there would be any auditing challenges in the upcoming year due to federal grant reporting. Tremper said staff had been trained in reporting requirements and expected it to go well. He said it was important for departments to communicate well with the Finance staff.

Finance Director Mast said staff had developed a system for project tracking, but due to the amount of federal funding received, a single audit would be required. Tremper said if more than \$500,000 was received in federal funding, there would be significant audit requirements.

Councilor Ahier asked staff to provide periodic updates to the City Council on their progress to eliminate duplicate files.

It was moved by Wood and seconded by Spatz to accept the Audit Report.

### **RECESS TO URBAN RENEWAL AGENCY MEETING**

Mayor Lesich recessed the City Council meeting to convene as the Urban Renewal Agency at 5:48 p.m.

### **RECONVENE TO CITY COUNCIL MEETING**

The City Council meeting reconvened at 6:00 p.m.

### **AUDIENCE PARTICIPATION**

City Attorney Parker stated that comments concerning the Wal-Mart issue should not be considered under Audience Participation. He said strict land use guidelines were in place concerning the matter and to hear comments under audience participation could be considered as ex-parte contact for the City Council.



Councilor Ahier asked how the citizens could communicate their concerns to the City Council. City Manager Young said the City Council could determine what they wanted to hear when the item appeared on the agenda. He said those comments would not be appropriate during this portion of the agenda.

Steve Kelsey, 3850 Knob Hill Road, The Dalles, questioned when the location of the meeting was changed. He said the newspaper reported it would be held at City Hall.

City Manager Young said the agenda was published and available on the website ten days prior to the meeting and was always scheduled to be at the Courthouse. He said the location had not been changed since that time and notices had been posted at City Hall to let people know the location was at the Courthouse.

Adam Gishner, 1314 Washington Street, The Dalles, said it was unfair to suppress public opinion.

City Manager Young said the Wal-Mart issue was a quasi-judicial process and rules must be followed. He said staff was responsible to ensure fairness to all parties involved.

#### **CITY MANAGER REPORT**

None.

#### **CITY ATTORNEY REPORT**

None.

#### **CITY COUNCIL REPORTS**

None.

#### **CONSENT AGENDA**

It was moved by Wood and seconded by Wilcox to approve the Consent Agenda as amended. The motion carried unanimously.

Items approved by Consent Agenda were: 1) approval of November 9, 2009 regular City Council meeting minutes; 2) approval to declare Police Department vehicle as surplus property; 3) Resolution No. 09-034 authorizing transfers of budget funds between departments and categories of the General Fund for the fiscal year ending June 30, 2010; and 4) authorization for City Clerk to endorse an OLCC change in ownership application for Portage Grill.

### **PUBLIC HEARINGS**

#### **Public Hearing to Receive Testimony Regarding Proposed Rate Increase by The Dalles Disposal**

Mayor Lesich reviewed the procedures to be followed for the public hearing.

City Attorney Parker reviewed the staff report.

#### **Testimony**

Erwin Swetnam, The Dalles Disposal, testified in support of the application and in response to a question asked at a previous meeting, said that cost reduction efforts were primarily in low turn over in employees, training and safety, reducing the injury and accident rates. He said the company was slowly investing in updated trucks which were much safer for the employees and would require fewer trips to the landfill, resulting in fuel savings.

Councilor Spatz said he had been asked by a citizen if any additional recycling services were proposed, such as offering more variety in what could be recycled. Mr. Swetnam said there were no plans to add items in the near future. Spatz said he appreciated the services offered by The Dalles Disposal.

Councilor Wilcox asked if the new trucks had more wheels to spread out the weight. Swetnam said they had an extra axle.

Mayor Lesich asked if The Dalles was doing better with recycling numbers over the past year. Swetnam said they recycling was good, but the problem was that some recycling companies were not reporting, which made the numbers seem lower.

Hearing no further testimony, the public hearing was closed.

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 5

Resolution No. 09-035 Approving a Rate Increase of 1.5% for Services Provided by The Dalles Disposal Service for Increased Operational Costs by The Dalles Disposal Service, Inc.

It was moved by Wilcox and seconded by Wood to adopt Resolution No. 09-035 approving a rate increase of 1.5% for services provided by The Dalles Disposal Services for increased operational costs by The Dalles Disposal Service, Inc. The motion carried unanimously.

**ACTION ITEMS**

Determination of Scope of Issues to be Considered During Remand Hearing on Approval of Site Plan for Proposed Wal-Mart Store and Scheduling of Date for Remand Hearing

City Attorney Parker reviewed the staff report. He noted the Land Use Board of Appeals (LUBA) had entered a final opinion and order on October 8, 2009, remanding the Site Plan application of Wal-Mart because the City failed to adequately explain the traffic counts taken on a weekday to measure the 30<sup>th</sup> highest hour volumes for traffic. Parker said the City had 30 days from the date of the applicants request to proceed, to make a final decision concerning the remanded matter.

Parker said the City's Land Use Development Ordinance (LUDO) did not include specific provisions establishing procedures for a hearing remanded by LUBA and the City Council had authority to decide the scope of issues to be considered in the remand hearing.

Parker reviewed his memorandum to the City Council, saying that LUBA had only remanded the traffic count question. He said the other issues that were decided by LUBA had been decided in the City's favor and should not be re-considered by the City Council.

Parker reminded the City Council that they had previously made a finding that Goal 9 of the Comprehensive Plan was not a requirement applied to the site plan application and the appellants did not raise the issue on appeal to LUBA. He recommended the City Council limit the public hearing to only the item remanded by LUBA.

City Attorney Parker said there were rules and procedures for quasi-judicial hearings which must be followed. He recommended to the City Council they allow testimony from the applicant, appellant, and interested citizens regarding items they would like the City Council to consider in the scope of the hearing, but said it would not be appropriate for testimony to include the merits of the issues.

Councilor Ahier asked when there would be an opportunity to hear concerns of the public. City Manager Young said the land use process needed to be protected. He suggested when the issue

was completed, the Council could conduct a meeting to hear from the citizens. He said staff was only trying to protect the process.

City Attorney Parker said if the Council decided to accept input on more than just the scope of the hearing, additional written testimony would be presented at that time.

Councilor Spatz said the City Council needed to decide if they supported the recommendation of the City Attorney. He said to go against their own legal counsel would not be a good idea. City Attorney Parker said it was his job to advise and guide the Council, but they had the ultimate decision. Parker said there was a risk of challenge if the Council allowed input regarding the merits of the hearing.

Councilor Dick asked if the Interchange Area Management Plan (IAMP) was a part of the traffic count remand issue. City Attorney Parker said the remanded issue was the traffic counts, not the IAMP. He again recommended that the City Council restrict the scope of the hearing to the remanded issue only.

Councilor Dick said he did want to hear from the citizens, but understood the need to protect the process. He expressed frustration that the audience did not understand the process or why they were not allowed to share their opinions. He suggested holding an additional meeting to hear testimony and said he did not want to rush the process.

It was the consensus of the City Council to hear public comments first, followed by the applicant and appellant comments.

#### Public Comments

Joe Usatine, 2426 West 13<sup>th</sup> Street, The Dalles, asked the Council to consider what would happen to the town regarding businesses closing if Wal-Mart was allowed to come to The Dalles. He said his experience of a Wal-Mart in another town had not been favorable to the town.

City Attorney Parker said it was not appropriate to talk about economic impacts and prior experiences.

Mr. Usatine asked the Council to consider the possible economic impact of a Wal-Mart to the community.

Tim Pitts, 307 West 20<sup>th</sup> Street, The Dalles, asked the City Council to consider environmental and conservation concerns, saying the proposed location was a natural area and should remain so.

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 7

Steve Kelsey, 3850 Knob Hill Road, The Dalles, asked the Council to consider the uses allowed for the property. He said changing the use to commercial put a burden on Wasco County to provide new roads. He said the applicant should have the burden to pay for development, not the County. Mr. Kelsey said he had previously served on the Wasco County Planning Commission and urged the City Council not to worry about deciding against staff recommendations.

Anya Kaufa, 202 West 13<sup>th</sup> Street, The Dalles, asked the City Council to consider the importance of community spirit and to keep The Dalles a special place for its residents.

Natalie Foster, 210 West Fourth Street, The Dalles, asked the City Council to consider more appropriate locations for a retail store, saying there were many abandoned stores and blighted areas in town that may better serve as a location.

Adam Gishner, 1314 Washington Street, The Dalles, agreed with Ms. Foster and asked the Council to also consider the impact to small business owners.

Loren Richman, 5225 Chenoweth Road, The Dalles, urged the City Council to limit the scope of the hearing to the item remanded by LUBA, to place time restrictions on the hearing and to move forward with a decision. He thanked the City Council for the work they were doing.

Bill Elton, 715 Garrison Street, The Dalles, said there was not an adequate number of grocery stores for the size of the community. He said the Country was founded on competition and it was what kept us strong.

City Manager Young asked if Mr. Elton was indicating the Council should also consider positive economic conditions of the application. Mr. Elton said that was correct.

Crystal West, 307 West 20<sup>th</sup> Street, The Dalles, urged the Council to move forward, but suggested if another grocery store was needed in the community, it did not need to necessarily be a Wal-Mart.

Doug Hattenhauer, 3205 Doane Road, The Dalles, asked the City Council to consider requesting an economic impact study and to be sure the traffic study was appropriate. He said it was expensive for the average citizen to appeal a land use action, making it difficult for many people to pursue an appeal. Hattenhauer said the economic issue may not have been raised during the appeal process, but the Council could still do the right thing and require a study.

Death Meyer, 3755 Skyline Road, The Dalles, agreed with the statement of Mr. Hattenhauer, saying it was the right thing to ask for an economic impact study.

Chris Zukin, 915 West 14<sup>th</sup> Street, The Dalles, said the Planning Commission, City Council, and LUBA had all heard the application and appeals and only one issue was remanded; the traffic impact. He said the City Council should only address that one issue because LUBA had already ruled on the other issues raised under the appeal.

Elizabeth Stroh, 1314 Washington Street, The Dalles, asked the City Council to require the applicant to make sustainable energy a priority.

#### Applicant Comments

Greg Hathaway, Davis Wright Tremaine, 1300 SW Fifth Avenue, Suite 200, Portland, Oregon, representing Wal-Mart, reviewed the request to initiate remand from LUBA, submitted to the City Council. He said he had requested of staff that the Council hear from the public regarding possible issues to be considered in the scope because Wal-Mart wanted to make sure everyone was heard.

Hathaway said there had been over 40 hours of testimony at the Planning Commission and City Council hearings and that a lot of work had already gone into this application process. He said the City Council had approved the application with many conditions and expense to Wal-Mart and after being appealed to LUBA, only one issue had been remanded to the City. Hathaway said the determination by LUBA was that the City's findings failed to adequately explain why traffic counts taken on a weekday satisfied the requirements to measure the 30<sup>th</sup> highest hour volumes. He said LUBA also found that traffic counts for a weekend day may be necessary for accuracy.

Hathaway requested the Council limit the scope of the remand proceedings to the issue identified by LUBA and to submit evidence explaining why traffic counts taken on a weekday satisfy ODOT's requirements for measuring the 30<sup>th</sup> highest hour volumes for the interchange. He further requested the opportunity to submit evidence addressing the LUBA comment of taking traffic counts for the interchange on a weekend. Hathaway requested the Council to schedule a public hearing, allow Wal-Mart to submit new evidence regarding the weekend traffic counts, allow interested parties to testify regarding any new evidence related to the interchange and limit the scope of the remand hearing to the issues identified by LUBA in its final opinion and order.

#### Appellant Comments

Kenneth Helm, 16289 NW Morrison, Portland, Oregon, representing the appellant, agreed that the scope of the hearing should include a look at the 30<sup>th</sup> highest hour volume for weekends. He said if the study from DKS Associates was not correct, it could have a big impact on the Chenoweth Interchange. He asked that the traffic impact issue include evidence on the 30<sup>th</sup> highest hour for a Saturday and that the testimony allowed be broad based. Helm asked the

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 9

Council to consider in the scope the wetlands issue. He said since the time of the site plan application, Wal-Mart had discovered many more wetlands on the property, at least 32 additional wetlands. Mr. Helm said the issue should be revisited.

Louise Langheinrich, 2108 Garrison Street, The Dalles, asked the Council to consider the wetlands issue because of the high increase in identified wetlands for the property. She said the total wetlands now represented approximately nine acres or 10 city blocks and was a substantial amount of property affected.

Langheinrich asked the City Council if staff was authorized to filter the emails sent to them via the City's website. She said the Council says they want citizen input, but the emails didn't reach the Council if staff withheld them.

Michael Leash, 306 Court Street, The Dalles, said the inability to talk about the economic impact was unfair. He questioned when citizens would have an opportunity to have a discussion with the City Council regarding that matter. Leash said it seemed that the Wal-Mart attorney was threatening the City Council about the scope and what they could hear during the remand process.

Kenneth Helm said it was the City Council's discretion to open the remand hearing to new issues and recommended they broaden the scope to include not only traffic issues, but wetlands issues as well. He said if the political outlook of the City Council had changed or they had any doubt about their prior decision, they had the discretion to open the hearing to additional issues. Helm said the City Council was not dictated to do only what was remanded by LUBA.

Steve Kelsey, 3850 Knob Hill Road, The Dalles, agreed with Mr. Helm, saying the Council could find that other issues could be included in the process.

In response to a question from Mayor Lesich, City Attorney Parker said the City Council had already made a finding that the economic impact was not an appropriate criteria for the site plan review. He said this matter could have been raised on appeal to LUBA by the appellant, but it was not appealed.

Councilor Wilcox said the appellant had also not appealed to the City Council on the matter of economic impact.

Councilor Ahier questioned why the appellant had never raised the economic issues on appeal if it had been so important to them.

Applicant Rebuttal

Mr. Hathaway said he understood the City Council's frustration and said that Wal-Mart was also frustrated. He said they had already spent approximately two years on this process and had worked very hard to follow all the rules and procedures. He said they had met the application process burden. Hathaway said the appellants had failed to raise economic impact on appeal to both the City Council and to LUBA.

Hathaway said it would be unfair to the applicant to expand the scope of the remand as it was the only issue left unresolved. He asked the City Council to define the scope as limited to the one issue. Mr. Hathaway said the LUBA remand included a proposal to review the weekend traffic volume, which had previously been submitted by the appellant for a Sunday. He said it was contrary to all other proceedings to now ask for the counts to be on a Saturday.

Mr. Hathaway said it was inaccurate for the appellant to say the wetlands delineation had not been done properly. He said LUBA had ruled it was done correctly by allowing the State Division of Lands and the Corps of Engineers to make that determination through their permitting process. Hathaway said the reason there were additional wetlands identified was because they had decided to submit the permit application for the entire piece of property, 67 acres. He said it was an unfair statement that Wal-Mart had previously misstated the wetlands.

Scott Franklin, Project Manager for Pacland, 6400 SE Lake Road, Portland, Oregon, said the delineation had taken place for the entire 67 acre parcel and they were currently in the permitting phase of the process. He said considering the entire parcel would provide better protection for the site. Mr. Franklin said this did not change the City Council's approach to allow the State Division of Lands and the Corps of Engineers to ensure wetlands compliance through their permitting process.

Mr. Hathaway requested the City Council to proceed by deciding the scope of the hearing and to schedule the public hearing.

City Council Deliberation

Senior Planner Gassman said staff had received several emails that did not pertain to the scope of the hearing and four that did pertain. The four emails pertaining to the scope of the remand hearing were submitted as testimony (attached as Exhibit "A").

Councilor Spatz asked if staff held the emails because of concerns they would cause ex-parte contact. City Manager Young said staff had informed the City Council the emails had been received and that unless it would impact the integrity of a land use process, the emails would be



forwarded. City Attorney Parker agreed, saying the emails could have been considered as ex-parte contact.

Councilor Ahier asked if a letter was sent to City Council in the mail, whether staff would open and read the letter. City Manager Young said staff routinely opened City Council mail.

Councilor Dick said if Wal-Mart welcomed the comments from citizens at this meeting, they should not be concerned if City Council read emails about the application.

City Manager Young recommended the City Council take legal advice from the City Attorney and not from the attorneys providing testimony.

Mr. Hathaway said he respected the City Attorney and the advice he provided to the City Council. He said he had welcomed comments pertaining to what the scope of the remand hearing should include, but would have objected to people testifying as to the merits of the case.

#### Recess

Mayor Lesich called a recess at 8:12 p.m. to allow the City Council time to read the four emails pertaining to the scope of the hearing.

#### Reconvene

The meeting reconvened at 8:22 p.m.

It was moved by Wilcox and seconded by Ahier to schedule a public hearing on December 14, 2009 to consider the request to proceed with the remand of Wal-Mart's site plan review application; the scope of the remand hearing be limited to the issues identified by LUBA in its Final Opinion and Order related to the Chenoweth Interchange, as set forth in the applicant's written request to proceed with the remand; the applicant be allowed to submit new evidence as set forth in the applicant's written request to proceed with the remand; and interested parties be allowed the opportunity to testify regarding any new evidence concerning the issues related to the Chenoweth Interchange which would be considered at the December 14, 2009 public hearing.

Councilor Wilcox said the City Council should move forward. He said no different information had been presented at this meeting. He said LUBA had upheld the City's approval regarding the wetlands and that the appellants had provided deceptive information by not stating the additional wetlands were included because the applicant had submitted approval for the entire 67 acre parcel. Wilcox said no one had ever mentioned using a 30<sup>th</sup> highest hour for volume on a Saturday and the City should stay with the proposal to use Sunday counts. He said the appellant

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 12

should stop introducing new suggestions that had never been considered in any of the hearings and that they should have appealed regarding the economics issue. Wilcox said if people were angry that economic issues could not be discussed they should be angry with the attorney because it was his fault for not raising it on appeal. He recommended the City Council limit the hearing to what was remanded by LUBA and follow the staff recommendation.

Councilor Ahier said LUBA had found the City acted correctly regarding the wetlands issue and did not believe it should be reconsidered. He agreed the process should move forward and be finalized.

Extend the Time of the Meeting

It was moved by Spatz and seconded by Wilcox to extend the time of the meeting to 9:00 p.m. The motion carried unanimously.

Council Deliberation, Continued

Councilor Dick said the Council was bound to follow land use rules, but he was second guessing the original decision to rezone the property. Dick said he was not impressed with ODOT's methodology to resolve traffic issues and had concerns regarding the impact on the Chenoweth Interchange. Councilor Dick said he supported slowing down the process and looking at the 30<sup>th</sup> highest hour of volume for both Sunday and Saturday.

Councilor Wood said if she had to consider the zone change for the property again, she would not have supported it. She said she wished the Council could have an economic impact study and wished the appellant had raised the issue on appeal. Wood said the Council should proceed with the remand for the traffic issue, but allow for a broad scope of testimony regarding that issue.

Councilor Spatz said he was not opposed to receiving testimony regarding Saturday traffic numbers. He said the economic study had never been appealed which prevented the Council from considering that information. Spatz said he hoped that matter could be discussed at a later time.

It was moved by Dick and seconded by Spatz to amend the motion to allow for testimony regarding the 30<sup>th</sup> highest hour traffic volume for Saturday calculations and to allow testimony and evidence from the public.

Community Development Director Durow said a seasonal adjustment calculation could be applied to allow for traffic counts to be done at any time. He said a survey had been conducted using Sunday, but did not believe a study had included Saturday traffic counts.

Mr. Hathaway said they had prepared a traffic study for Sunday traffic counts, based on the LUBA remand, but had not included Saturday figures because it was not relevant to the LUBA remand. He said being required to conduct an additional study could slow the decision for months.

Councilor Wilcox said he opposed the amendment, saying it was not realistic to ask for additional traffic information beyond what LUBA stated.

City Manager Young asked for clarification regarding the Saturday figures, asking if Council wanted the applicant to provide a study or if they wanted to allow testimony regarding Saturday counts.

It was the consensus of the Council they wanted to allow testimony but were not asking the applicant to provide the additional study.

The amendment to allow for testimony regarding the 30<sup>th</sup> highest hour traffic volume for Saturday calculations and to allow testimony and evidence from the public was voted on and carried; Wilcox opposed.

The amended motion to schedule a public hearing on December 14, 2009 to consider the request to proceed with the remand of Wal-Mart's site plan review application; the scope of the remand hearing be limited to the issues identified by LUBA in its Final Opinion and Order related to the Chenoweth Interchange, as set forth in the applicant's written request to proceed with the remand; the applicant be allowed to submit new evidence as set forth in the applicant's written request to proceed with the remand; and interested parties be allowed the opportunity to testify regarding any new evidence concerning the issues related to the Chenoweth Interchange which would be considered at the December 14, 2009 public hearing and to allow for testimony regarding the 30<sup>th</sup> highest hour traffic volume for Saturday calculations and to allow testimony and evidence from the public was voted on and carried; Wilcox opposed.

MINUTES (Continued)  
Regular Council Meeting  
November 23, 2009  
Page 14

**ADJOURNMENT**

Being no further business, the meeting adjourned at 8:50 p.m.

Submitted by/  
Julie Krueger, MMC  
City Clerk

SIGNED:

\_\_\_\_\_  
Nikki L. Lesich, Mayor

ATTEST:

\_\_\_\_\_  
Julie Krueger, MMC, City Clerk

## Richard Gassman

---

**From:** Ken Helm [kmhelm@comcast.net]  
**Sent:** Monday, November 23, 2009 8:22 AM  
**To:** Gene Parker; Richard Gassman  
**Subject:** City Council hearing  
**Attachments:** Remand Leter - Nov 23 2009.doc

Gene,

Attached is a letter concerning the City Council hearing this evening. Will you please provide it to the Council. I expect to be at the hearing and will bring hard copies as well.

Thank you.

Ken

Kenneth D. Helm  
Attorney at Law  
16289 NW Mission Oaks Dr.  
Beaverton, Or 97006  
503.753.6342

KENNETH D. HELM  
ATTORNEY AT LAW

16289 NW MISSION OAKS DRIVE  
BEAVERTON, OR 97006

TELEPHONE  
503-753-6342

E-MAIL  
knhelm@comcast.net

VIA E-MAIL AND MAIL DELIVERY

Mr. Gene Parker  
City Attorney  
313 Court Street  
The Dalles, OR 97058

November 23, 2009

Re: Remand – Site Plan Review 379-08

Mr. Parker,

As you know, I represent Citizens for Responsible Development in The Dalles. We have reviewed your memorandum of November 12, 2009 which advises the City Council on its options for processing the above remand from the Land Use Board of Appeals. We have also reviewed Greg Hathaway's November 10, 2009, letter requesting that the city initiate remand proceedings. We offer the following comments.

**Traffic Study.** Wal-Mart has requested that the city: 1) schedule a public hearing to consider Wal-Mart's request; 2) allow Wal-Mart to submit new evidence as set forth [in Wal-Mart's letter] and, 3) allow interested parties the opportunity to testify regarding any new evidence related to the Chenoweth Interchange.

In general, CFRD agrees with this approach with the following considerations. The City Council should require Wal-Mart to follow ODOT guidelines and utilize the 30<sup>th</sup> highest hour for calculating the volume to capacity ratio for and Chenoweth Interchange and employ the same process for a Saturday and Sunday calculation. CFRD also request that the City Council not limit the scope of the public testimony and argument to simply reacting to Wal-Mart's new evidence, but also allow the public to submit their own evidence concerning the 30<sup>th</sup> highest hour selection and volume to capacity ratio. CFRD also requests that the City Council schedule at least two public hearings on this matter. One hearing to examine and respond to Wal-Mart's new evidence, and another to review and respond to the city's new findings in response to LUBA's remand. There is certainly sufficient time to accommodate such a schedule.

**Wetlands.** While CFRD agrees that the City Council may limit the scope of LUBA remand proceeding to issued identified by LUBA, it is not required to do so. This is true particularly where new evidence is available related to the proposed site plan. CFRD has

November 23, 2009  
City Council Meeting Minutes

submitted wetland maps to the city based on Wal-Mart's studies which show several times more wetlands than were originally identified in the site plan approved by the City Council.<sup>1</sup> While LUBA agreed with the city as to the wetlands that were identified in Wal-Mart's original site plan, LUBA's decision cannot be reasonably extended to these newly discovered wetlands and vernal pools.

Based on its prior findings, the city was forced to argue at LUBA that the wetlands identified on Wal-Mart's original site plan were insignificant and not worthy of protection under the city code. Is that truly the City Council's position with regard to wetlands inside the city's jurisdiction? Certainly, the City Council will want to review the newly discovered wetlands on the site to determine whether those wetlands are entitled to some level of protection under the city code. CFRD requests that the City Council take up these questions as part of the remand proceedings.

Please provide these comments to the City Council for this evening's hearing and make them a part of the record in this matter.

Thank you for the opportunity to comment.

A handwritten signature in black ink, appearing to read "Kenneth D. Helm". The signature is written in a cursive, slightly slanted style.

Ken Helm

---

<sup>i</sup> CFRD submitted these maps subsequent to LUBA's remand and requested that the maps be made part of the file for both the subdivision approval 62-08 and 379-08. CFRD now requests that the maps be made part of this remand record by this reference.



## Richard Gassman

---

**From:** Izetta F. Grossman  
**Sent:** Monday, November 23, 2009 8:26 AM  
**To:** Richard Gassman; Nolan Young; Gene Parker  
**Subject:** FW: To Mayor Lesich and Councilors  
**Attachments:** testimony to council.pdf

Izetta Grossman  
Executive Secretary  
City Manager's Office  
City of The Dalles  
313 Court St  
The Dalles, OR 97058  
541-296-5481 Ext 1119  
541-296-6906 Fax

-----Original Message-----

From: John Nelson [mailto:joteg@gorge.net]  
Sent: Saturday, November 21, 2009 10:38 PM  
To: Izetta F. Grossman  
Subject: To Mayor Lesich and Councilors

Attached as a pdf is my testimony to the City Council on the action item concerning the LUBA remand for the Council Meeting of November 23, 2009.

Thank you,

John Nelson

524 West 3rd Place  
The Dalles, OR  
97058

[joteg@gorge.net](mailto:joteg@gorge.net)

To: Mayor Lesich and Councilors

I am providing you my written testimony on the action item being considered at the November 23, 2009 Council meeting which is to determine the scope of issues to be considered during the yet to be determined remand hearing on approval of the site plan for the proposed Wal-Mart store.

In addition to the traffic issue that LUBA has remanded to The City of The Dalles I urge you to broaden the scope of issues to be considered to include consideration of new information as to the correct number of wetlands that will be destroyed in the development of the subdivision which includes the Wal-Mart site plan, the degrading effects such development might have on nearby Chenoweth Creek, and consideration of the impact of this development on existing local businesses which you have not addressed.

In the LUBA appeal the petitioners (of which I was one) argued that the wetlands located on site were "significant natural features" and that the Land Use Development Ordinance requires the "elements of the site plan are to be arranged to preserve and maintain public amenities and significant natural features." We further argued that the site plan failed to show all the wetlands located on the property and thus failed to preserve these significant natural features as required by LUDO. The city interpreted the phrase "significant natural features" to include those contained in the "natural resource inventories in either the 1982 Comprehensive plan or the 1989 Riverfront Plan". Because these wetlands were not shown on either of these documents the city reasoned they were not "significant natural features".

The Port of The Dalles Interchange Wetland Monitoring Report of 2002 states that the Wetlands, which were later destroyed by the construction of the I-84 interchange, and which were near the vernal wetlands on the Wal-Mart site and of similar type, were not high functioning vernal wetlands, but nevertheless "were located within the Chenoweth watershed and were suspected to improve water quality in Chenoweth Creek, a stream supporting federally listed fish species." Chenoweth Creek is designated as a "water quality limited" stream under the Federal Clean Water Act. These

wetlands occupied about 1 acre of land and were mitigated for on a site adjacent to the proposed Wal-Mart site. The vernal wetlands which are located within the subdivision which will encompass the Wal-Mart site are now defined as numbering 40, not the approximate 9 that were shown on the documents upon which you made your decision to approve the site plan. These vernal wetlands are larger in scope, occupying 9 acres, and have a greater role to play in maintaining the water quality of Chenoweth Creek, than those already destroyed but considered important! If nothing else the city's reasoning not to consider these wetlands significant because they were not mentioned in former documents demonstrates a real weakness in the Land Use Development Code and shows the city underestimates the impact to all such wetlands in its jurisdiction.

The Comprehensive Plan is our guide to ensure that the city's vision for growth is achieved in an orderly manner. This includes economic factors, such as the impact of new development on existing local business. During the hearings in the early spring of 2009, residents were not allowed to discuss these potential economic impacts. During the subdivision hearing the citizens should have been able to hear economic evidence. When the citizens were told by council members they would be able to present economic arguments at the site plan hearing, that is the time the city attorney should have told the Councilors that it would not be possible, and that the code sections that applied to the site plan did not address economics. He, instead, remained silent. The site plan was not the proper place for an economic discussion. The council should give the opportunity to its citizens to finally have this discussion with Wal-Mart representatives at the remand hearing.

Thank you for reading and considering the merits of this testimony.

John Nelson  
524 West 3rd Place  
The Dalles, OR  
97058

## **Richard Gassman**

---

**From:** Izetta F. Grossman  
**Sent:** Monday, October 19, 2009 1:09 PM  
**To:** Richard Gassman  
**Subject:** FW: Wal-Mart

Dick

Gene said I should forward all these to you - so enjoy ☺

*Izetta Grossman*  
Executive Secretary  
City Manager's Office  
City of The Dalles  
313 Court St  
The Dalles, OR 97058  
541-296-5481 Ext 1119  
541-296-6906 Fax

---

**From:** Elizabeth Stanek [mailto:stanratt@mowinet.com]  
**Sent:** Friday, October 16, 2009 8:43 PM  
**To:** Izetta F. Grossman  
**Subject:** Wal-Mart

Dear Mayor Lesich, Now that the LUBA has tossed the Wal-Mart case back to the City Council, I hope you will use this opportunity to hear what opponents are saying about traffic and wetlands. The Dalles continues to revitalize its central commercial district, to attract environmental tourists, and to find alternatives to commercial sprawl. Yet the proposal submitted by PACLAND for a Wal-Mart nearly three times the size of a football field is just out of scale with the size of your small community. During the 1990s, The Dalles added roughly 1,000 people to its population base, but even adding in the entire population of Wasco County, you still don't need a store this big. Even though this project is located on commercial land, the Planning Commission and the City Council still have the right to reject a project because of its adverse impact in areas like existing economic activity, traffic and roads, and the environment. You can ask that a project be reduced in size, and in many communities, developers have respected local desires for smaller projects. The project does not fit The Dalles market. It's a classic example of suburban sprawl, and is largely incompatible with your land use goals. Hood River rejected a Wal-Mart superstore, as have a number of other communities in Oregon. You don't have to accept a one-size-fits-all mentality. The only thing that stands between PACLAND gobbling up a major piece of The Dalles, is the Citizens for Responsible Development. Madame Mayor, you now have a second chance to get this analysis right, and to grow smart. This Wal-Mart is

definitely not in the interest of the overall vitality of The Dalles. As new small business owners in The Dalles, we urge you to reject the Wal-Mart Supercenter.  
Sincerely, Elizabeth Stanek and John Ratts

## **Richard Gassman**

---

**From:** Izetta F. Grossman  
**Sent:** Monday, November 09, 2009 2:40 PM  
**To:** Gene Parker; Richard Gassman; Nolan Young  
**Subject:** FW: To the Mayor and members of The Dalles City Council re:Wal-Mart concerns

Gene,

This just came in – it does address the IAMP – can I send it on?

This person called this AM and asked how to get something to the council and I said this was the fastest way.'

If you say I can't give this to council then you need to send her back an email explaining why so I don't look like a big fat liar... or even a skinny little liar. I don't do liar. ☺

Izetta Grossman  
Executive Secretary  
City Manager's Office  
City of The Dalles  
313 Court St  
The Dalles, OR 97058  
541-296-5481 Ext 1119  
541-296-6906 Fax

---

**From:** Deborah Blair [mailto:dmbclair@gorge.net]  
**Sent:** Monday, November 09, 2009 2:25 PM  
**To:** Izetta F. Grossman  
**Cc:** dmbclair@gorge.net  
**Subject:** To the Mayor and members of The Dalles City Council re:Wal-Mart concerns

November 9, 2009

**To: the Mayor and members of the City Council of The Dalles**  
**Re: Proposed construction of a Super Wal-Mart store in our community**

**Dear Friends:**

I am very concerned, for several reasons, about the potential impact of a Super Wal-mart store in our small town.

First, I live on the west side of town and am concerned about the way increased traffic will affect

access to I-84 and neighborhoods at our end of town.

I made a point of attending the meeting at the Civic Center this summer when the IAMP

November 23, 2009  
City Council Meeting Minutes

was presented. I also attended the last meeting of the City Council. What surprised me about that council meeting was that over an hour passed before the word "Wal-Mart" was even mentioned. Up to that point, the discussion about the IAMP was all couched in provisional and conditional terms, as though the big "elephant" in the hearing room wasn't Wal-Mart. It was only when the public was invited to comment that the immediate need for the IAMP was clearly identified as being caused by Wal-Mart. Theoretically, it stands to reason that future community growth may require I-84 interchange adjustments, but it is solely because of Wal-Mart's plans that these elaborate considerations of future traffic needs are pending now.

Second, I have read that Wal-Mart's studies of their impact on local traffic congestion were

declared inadequate and warrant a review by the Oregon Land Use Board.

It appears that Wal-Mart's study of the impact on adjacent wetlands may also be inadequate by having omitted as many as 40 wetland areas. If this is the case, not only is a more thorough analysis of wetland impact urgently required, but it further undermines my confidence in Wal-Mart's readiness to be a constructive and honest partner in our community's commercial future.

Finally, I have deep reservations about the impact of this super store upon our local stores.

There are enough empty store fronts in town as it is. We should assist those businesses that remain, not threaten them with Wal-Mart's cut rate pricing, obtained in some cases by cut-throat employee policies.

In addition to the obvious economic, traffic and environmental changes that Wal-Mart could bring to The Dalles will be what I deem "character-changing" alterations to our small town. Do we really want to become a "big Box" town? I hope not!

I urge you to hold a hearing to request more accurate data from Wal-Mart on both the wetlands and traffic issues, so that there is additional opportunity to consider these matters and assess the real impact of any increased costs that have not been accurately measured.

*Sincerely,  
Deborah Blair*

November 23, 2009  
City Council Meeting Minutes

950 Pomona Street # 187  
541 296-6133

November 23, 2009  
City Council Meeting Minutes

Exhibit "A"  
Page 12 of 12



## **MINUTES**

SPECIAL COUNCIL MEETING  
OF  
NOVEMBER 16, 2009  
4:00 P.M.  
CITY COUNCIL CHAMBER  
CITY HALL  
THE DALLES, OREGON

**PRESIDING:** Mayor Nikki Lesich

**COUNCIL PRESENT:** Bill Dick, Carolyn Wood, Jim Wilcox, Dan Spatz

**COUNCIL ABSENT:** Brian Ahier

**STAFF PRESENT:** City Manager Nolan Young, City Attorney Gene Parker, City Clerk Julie Krueger, Public Works Director Dave Anderson

### **CALL TO ORDER**

Mayor Lesich called the meeting to order at 4:03 p.m.

### **ROLL CALL**

Roll call was conducted by City Clerk Krueger; Councilor Ahier absent.

### **APPROVAL OF AGENDA**

It was moved by Wilcox and seconded by Spatz to approve the agenda as presented. The motion carried unanimously, Ahier absent.

Councilor Spatz asked if he should decline to participate in the Executive Session because his wife was an employee of Mid Columbia Medical Center. City Attorney Parker said he would have no financial gain by participating in the discussion.

City Manager Young said Councilor Ahier was not in attendance because he had a conflict of interest and would not be participating in the Executive Session discussion.

MINUTES (Continued)  
Special Council Meeting  
November 16, 2009  
Page 2

**EXECUTIVE SESSION**

Mayor Lesich recessed the meeting to Executive Session at 4:05 p.m. in accordance With ORS 192.660 (2) (e) to conduct deliberations with persons designated by the governing body to negotiate real property transactions.

**Reconvene to Open Session**

The meeting reconvened at 4:49 p.m.

**ADJOURNMENT**

Bing no further business, the meeting adjourned at 4:50 p.m.

---

Submitted by/  
Julie Krueger, MMC  
City Clerk

SIGNED: \_\_\_\_\_

Nikki L. Lesich, Mayor

ATTEST: \_\_\_\_\_

Julie Krueger, MMC, City Clerk

## **MINUTES**

TOWN HALL MEETING  
OF  
NOVEMBER 16, 2009  
5:30 P.M.  
MID COLUMBIA SENIOR CENTER  
THE DALLES, OREGON

**PRESIDING:** Mayor Nikki Lesich

**COUNCIL PRESENT:** Bill Dick, Jim Wilcox, Carolyn Wood, Dan Spatz, Brian Ahier

**COUNCIL ABSENT:** None

**STAFF PRESENT:** City Manager Nolan Young, City Attorney Gene Parker, City Clerk Julie Krueger, Public Works Director Dave Anderson, Police Chief Jay Waterbury, Finance Director Kate Mast, Senior Planner Dick Gassman, Development Inspector Jim Schwinoff, Engineer Dale McCabe, Administrative Intern Jared Cobb, Librarian Sheila Dooley

### **CALL TO ORDER**

The meeting was called to order by Mayor Lesich at 5:30 p.m. Lesich welcomed the audience and asked the City Attorney to clarify reasons why the Wal-Mart issue would not be discussed at the meeting.

City Attorney Parker explained that the Wal-Mart issue was scheduled for discussion at the November 23<sup>rd</sup> Council meeting and because it was a land use issue, was subject to land use rules. He said comments regarding the matter would be inappropriate and could be considered as ex-parte contact for the City Council.

### **STATE OF THE CITY UPDATE**

City Manager Young called on staff members to review each subject listed on the agenda.

## MINUTES (Continued)

Town Hall Meeting

November 16, 2009

Page 2

### Urban Growth Boundary Update

Senior Planner Dick Gassman explained the State required cities to have a 20 year supply of developable residential, commercial and industrial lands. He said the review had not occurred since the 1980's and that an additional land supply was needed to meet the requirement.

Gassman said part of the expansion of the Urban Growth Boundary included working with the National Scenic Area because that boundary would also need to be amended to accommodate a new Urban Growth Boundary.

### Residential Street and Sidewalk Improvement Standards Update

Senior Planner Gassman said staff had been directed to address street and sidewalk standards for the community. He said staff had developed several categories for improvements, including full improvement, partial improvement, deferred improvements and status quo. He said the proposal would be considered by the Planning Commission in December and be forwarded to the City Council for consideration in January or February.

### East Gateway Project Update

Development Inspector Jim Schwinoff reported that Brewery Grade would re-open on November 20<sup>th</sup>, with some lane restrictions and would remain open through the holiday season. He said the project would resume in January, completing the roundabout, with project completion estimated to be May, 2010.

### Marine Terminal and Festival Area Project Update

Administrative Intern Jared Cobb reported that both projects were estimated to be completed in Spring, 2011. He said the marine terminal would provide for economic, recreational, and commercial activities and re-establish an economic focal point in The Dalles. He said it would include pedestrian access. Cobb said the estimated cost of the project was \$4 million. He said the festival area would provide for green space, public restrooms, pedestrian paths, and an area that could be used for events such as a farmer's market, Cherry Festival and Historic The Dalles Days events. Cobb said the estimated cost for the project was \$2.5 million.

### Airport Projects Update

Airport Manager Chuck Covert reported the newly constructed hangars were already nearly occupied. He said they were working on the Master Plan update, runway testing and engineering, development of an industrial park, upgrades to the watery system, and the golf course.

#### City Website Information

City Clerk Krueger reported the City had recently updated its website. She said it was easy to find information and encouraged citizens to visit the site at [www.thedalles.org](http://www.thedalles.org) and asked people to let staff know their thoughts or to call if they had any questions. Krueger said a survey had been added to the website which had allowed citizens to voice their preferences for subjects to be discussed at the Town Hall meeting tonight.

#### Chenowith Interchange Plan Update

Senior Planner Gassman said the City Council had approved the Chenowith Interchange Area Management Plan (IAMP) and it was now forwarded to Wasco County and Oregon Department of Transportation for approval. He said all entities were required to approve the Plan.

#### **DISCUSSION REGARDING SURVEY RESULTS**

City Manager Young reported other items received through the City's website survey which had not been included in tonight's meeting were: Wal-Mart; regulating the size of big box stores; concerns about safety of roundabouts; water rates; marine terminal location; challenges with the proposed festival location; public transit - street cars; youth, parks and recreation, and Home at Last partnerships; adjacent property owner rights with neighboring development; and one thank you for allowing input.

#### **PUBLIC COMMENTS AND QUESTIONS**

Linda Quackenbush, 1005 Richmond Street, The Dalles, expressed concern regarding the cost to property owners for construction of local improvement districts (LID's). She said if her property was included in an LID, it would cost approximately \$51,689, and if payments were made, there was a 10% interest charge, which would cost \$683 per month for 10 years. She said this was too much of a financial burden to property owners.

Councilor Wilcox said the City had been working on LID issues for at least three years and that policies had been created to help alleviate property owner burden. He said there were multi frontage and corner lot relief components included in the policy. Wilcox said upcoming street and sidewalk standards policies may also help because not all properties would be treated the same regarding the type of improvements that would be required.

City Manager Young said the City had also adopted a policy stating if the City required outside financing, such as bonds, to construct an LID project, the interest rate for property owners would be only one percent above the rate the City received to repay the loan. He said an example of that was the West First Street LID, in which the City had revenue bond financing at 4%, so the property owners could make payments to the City at only 5%.

Marie Clark said she was opposed to being annexed into the City. She expressed displeasure about increasing water rates in the Chenoweth Water District, and asked the City Council to do something to help create jobs for local citizens.

Jack Bartell, 2616 West 13<sup>th</sup> Street, The Dalles, asked for an update on the armory relocation.

City Manager Young said the current site of the armory was owned by Wasco County and there had been some public meetings to determine what may be the best use for the property. He said a conditional use permit had been approved for the Oregon Military Department to construct a new armory at the college site and it was expected that construction would begin in 2012.

Monte Malcolm, 5075 Cherry Heights Road, The Dalles, asked how he could obtain a copy of the proposed urban growth boundary map. Senior Planner Gassman said he could stop by the City Planning Department. City Manager Young said staff would also make sure the map was posted on the City's website.

John Nelson, 524 West Third Place, The Dalles, commended the City Council for conducting a Town Hall style meeting, saying the average citizen did not always feel heard at regular meetings. He said this was a good forum for audience participation. Nelson said he believed the flexibility discussed regarding street and sidewalk standards was reasonable and made sense.

Mr. Nelson said he favored making the downtown more attractive from the freeway and said it was important to beautify the area. Nelson said he had recently attended a gathering to hear about the history of Mill Creek. He said it was important to remember the creek had been the beginning of the development of our community and should be preserved and taken care of.

Mr. Nelson thanked the City for updating the website, saying transparency was important and that people should not feel shut out. He said it was good to be able to have forums to tell the City what was important to them. Mr. Nelson said he did not think it had been fair that the Council recently decided to close testimony regarding the IAMP before everyone had an opportunity to provide their comments. He said the consultant had previously stated it would be unsafe for traffic movement to signalize the one area that had been designated as a roundabout, yet the Council had included signalization as an option.

Nelson said the public did not always understand legal advice provided to the City Council by the City Attorney and said it would be appreciated if there was an explanation at the meetings as to why particular advice was given.

Councilor Ahier thanked Mr. Nelson for his comments and said the City had been working hard to improve communications and increase citizen involvement. He encouraged citizens to apply for positions on various City committees and commissions and said he hoped more people would consider running for City Council positions.

Councilor Spatz thanked Mr. Nelson for his participation on the Traffic Safety Commission and agreed that legal advice provided at City Council meetings should be explained to the public.

Councilor Wilcox said he had been volunteering on City committees and then for City Council since the 1990's when he worked on the comprehensive plan development. He encouraged all citizens to be more involved by serving on committees.

Robert Perkins, 2845 East 10<sup>th</sup> Street, The Dalles, said he also had a large parcel which had frontage on two streets and expressed concern regarding the high cost of LID's to property owners.

Councilor Wilcox said the frontage relief policy would require that he only pay for one side of the development if it was a single lot.

Mrs. Quackenbush said she hoped the City Councilors would calculate what it would cost if they had to pay for LID construction on their own properties.

Councilor Wood said she would be subject to one herself. She said the City Council had implemented the fairest possible methods of assessment and had worked hard to make adjustments that would be favorable for property owners.

Michael Leash, 306 Court Street, The Dalles, said it appeared the City used the Comprehensive Plan only when it was to their advantage and disregarded it at other times.

City Manager Young said the City did always follow its own rules. City Attorney Parker said some land use applications were not subject to the Comprehensive Plan and others were, so it would depend on a particular application as to whether the Comprehensive Plan applied.

MINUTES (Continued)  
Town Hall Meeting  
November 16, 2009  
Page 6

**ADJOURNMENT**

Hearing no further public input, Mayor Lesich thanked everyone for their attendance and adjourned the meeting at 7:20 p.m.

Submitted by/  
Julie Krueger, MMC  
City Clerk

SIGNED: \_\_\_\_\_  
Nikki L. Lesich, Mayor

ATTEST: \_\_\_\_\_  
Julie Krueger, MMC, City Clerk



**RESOLUTION NO. 09-036**

**A RESOLUTION ADOPTING A POLICY FOR USE OF  
ELECTRONIC MESSAGES AND RETENTION OF SUCH  
MESSAGES FOR THE CITY COUNCIL**

**WHEREAS**, with the increasing use of electronic messages, commonly referred to as “email”, as a communication tool, public bodies have been encouraged to develop a policy for use of email messages by members of the governing body, and for the retention of email messages generated by members of the governing body; and

**WHEREAS**, City staff has prepared such a policy for the City Council’s review and consideration; and

**WHEREAS**, the City Council has reviewed the proposed policy and believes that adoption of such a policy is in the best interests of the citizens of The Dalles;

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF THE DALLES  
RESOLVES AS FOLLOWS:**

Section 1. Policy Adopted. The policy establishing procedures for the use of electronic messages (e-mail) by City Council members, and for the retention of email messages generated by Council members, as set forth in Exhibit “A”, is hereby approved and adopted.

Section 2. Effective Date. This Resolution shall be effective as of December 14, 2009.

**PASSED AND ADOPTED THIS 14<sup>TH</sup> DAY OF DECEMBER, 2009**

Voting Yes, Councilors: \_\_\_\_\_

Voting No, Councilors: \_\_\_\_\_

Absent, Councilors: \_\_\_\_\_

Abstaining, Councilors: \_\_\_\_\_

**AND APPROVED BY THE MAYOR THIS 14<sup>TH</sup> DAY OF DECEMBER, 2009**

Attest:

\_\_\_\_\_  
Nikki L. Lesich, Mayor

\_\_\_\_\_  
Julie Krueger, MMC, City Clerk



## CITY COUNCIL E-MAIL POLICY

### 1 GENERAL

Electronic mail (e-mail) messages are within the scope of the Public Records Law and Records Retention Law. Because of this, the City Council has developed the following policy for use of electronic messages (e-mail) by City Council members and the retention of e-mail messages generated by City Council members.

### 2. STATUS OF E-MAIL MESSAGES

- A. E-mail messages generated or retained in a laptop computer provided by the City for a Council member's use, have the potential to be classified as a public record under Oregon law, potentially subject to disclosure under the provisions of the public records law. E-mail messages which relate to City business, which are generated or transmitted within the course of a Council member's regular duties, which messages are retained upon a personal computer belonging to the Council member, are likely to be classified as a public record under Oregon public records law, and potentially be subject to disclosure.
- B. On behalf of a City Council member, the City retains the discretion to assert any applicable privileges and objections if a public records request or discovery request is made for any e-mail messages which are retained upon a laptop computer furnished by the City for the Council member's use, or upon a personal computer belonging to the City Council member.

### 3. USE OF E-MAIL

- A. City Business. E-mail is to be used for matters that pertain directly to the business of the City. E-mail communications must be professional in content and appropriate to a governmental agency.
- B. General Guidelines. Electronic messages are legally discoverable and permissible as evidence in a court of law. Electronic messages can never be unconditionally and unequivocally deleted. The remote possibility of discovery always exists. Council members should use caution and judgment in determining whether a message should be delivered electronically instead of in person. Councilors should be suspicious of messages sent by persons not known by the Council member. Council members should not open an attachment in an electronic message unless the attachment was expected to be sent. Council members shall delete and not forward any "chain letters" Council members should not read an email message containing an attachment from an unknown source. Such messages should be

immediately deleted. Email messages which have been identified as "spam" messages should be immediately deleted.

- C. **Public Meetings Issues.** Under Oregon law, any exchange of emails between the Council members which effectively would result in a decision concerning an issue, or where it appears that the Council members are deliberating on an issue, or appear to be gathering information to engage in future deliberation on an issue, could be construed to constitute a public meeting. The use of email messages by Council members to engage in active deliberations or discussion, including the expression of opinions or the promotion and discussion of ideas related to a particular issue, is strongly discouraged. The use of email messages for the passive receipt of information among Council members, such as the distribution of an agenda staff report, is a permissible use of e-mail among Council members.
- D. **Use for Community Service or Charitable or Non-profit Purposes.** Council members may use e-mail for community service, non-profit or charitable activity not sponsored by the City.
- E. **Prohibited Use.** Use of City e-mail resources for non-City business activities, outside business activities or activities for personal gain is prohibited. Council members are strongly cautioned that such use likely constitutes a violation of the Oregon Ethics Code and may result in civil liability for the Council member. The City prohibits discrimination based on age, race, gender, sexual orientation or preference, physical or mental disability, sources of income, or religious or political beliefs. Use of the City's electronic messaging resources to harass or discriminate for any or all of the aforementioned reasons is prohibited.
- F. **Identification of E-mail.** All e-mail messages shall be clearly identified as to the author of the message. Anonymous messages are prohibited.

#### 4. RETENTION OF E-MAIL

- A. **Because e-mail messages sent or received by Council members in connection with City business are public records, they are subject to the same retention requirements as hard copy documents. In the e-mail context, "retention" means "do not delete." E-mail messages must be retained even if they are confidential, privileged, or otherwise exempt from disclosure under Oregon public records law. The retention and disposition of public records is authorized by retention schedules issued by the Secretary of State Archives Division. Records may be retained in hard copy or electronic format. If a hard copy of the e-mail message is printed, then the electronic version may be deleted. The hard copy must then be kept as long as required by the applicable retention schedule. An e-mail message**

retained in electronic format shall be retained for the applicable period set forth in the retention schedule adopted by the City.

- B. Council members have a responsibility to be familiar with the retention schedules applicable to City records, and to ensure that the e-mail messages they send or receive are retained in accordance with the appropriate records retention schedules. Council members shall not delete any e-mail message unless its retention period has expired or it has been printed out as a hard copy.
- C. Personal email messages are defined as a personal exchange not covered by the State of Oregon records retention schedule, and they should be deleted after they have been read. Examples of personal e-mail messages include:
  - Lunch plans
  - Jokes
  - Chain letters
  - Messages to family and friends
  - Attached files such as photographs
- D. Temporary or transitory e-mail messages are any exchange of communication that is fulfilled almost immediately upon request. These messages should be kept until the task is completed or the value of the message has passed. Examples of these types of messages include:
  - Charity campaigns
  - Listserv messages
  - City-wide communications
  - Meeting reminders
  - Deadline reminders
  - Routing slips
  - Fax confirmation
  - Reading materials
  - Reference materials
  - FYI (for your information) e-mail information that does not elicit a response
- E. E-mail messages soliciting a response are any exchange of communication that requires the recipient to respond or perform an action on the message received. These messages may include attachments to which the recipient will also need to respond. The retention of these e-mails and any accompanying attachments will depend upon the content of the message. Examples of these types of messages include:

- Contract negotiations
  - Administration of fiscal communications
  - Policy drafts
  - Reports
  - Requests for information
- F. E-mail messages which document communications created or received by the City, and which directly relate to a City program or City administration, and which are not otherwise specified in the City Records Retention Schedule, or in any applicable state rule or statute, will be classified as correspondence. Such e-mail could include messages which communicate formal approvals, direction for action, and information about contracts, purchases, grants, personnel and particular projects or programs. A copy of the e-mail message should be filed with the associated program or administrative records, and retained in accordance with the retention schedule specified for the program or administrative records.
- G. Questions about retention of e-mail messages should be directed to either the City Clerk or the City Attorney.

Signed and dated: \_\_\_\_\_

\_\_\_\_\_  
Mayor Nikki L. Lesich

\_\_\_\_\_  
Councilor at Large Carolyn Wood

\_\_\_\_\_  
Councilor Positions #1 Jim Wilcox

\_\_\_\_\_  
Councilor Position #2 Dan Spatz

\_\_\_\_\_  
Councilor Position #3 Bill Dick

\_\_\_\_\_  
Councilor Position #4 Brian Ahier

**RESOLUTION NO. 09-039**

**A RESOLUTION CONCURRING WITH THE  
MAYOR'S APPOINTMENT OF DENNIS DAVIS  
TO THE HISTORIC LANDMARKS COMMISSION**

**WHEREAS**, there is a vacancy on the Historic Landmarks Commission; and

**WHEREAS**, Mayor Lesich has selected Dennis Davis for appointment to the expired  
term on the Historic Landmarks Commission; and

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL AS  
FOLLOWS:**

Section 1. The City Council hereby concurs with the appointment of Dennis Davis to fill  
an expired term on the Historic Landmarks Commission, term to expire May 31, 2013.

Section 2. This Resolution shall be effective December 14, 2009.

**PASSED AND ADOPTED THIS 14th DAY OF DECEMBER, 2009**

Voting Yes, Councilors: \_\_\_\_\_

Voting No, Councilors: \_\_\_\_\_

Absent, Councilors: \_\_\_\_\_

Abstaining, Councilors: \_\_\_\_\_

**AND APPROVED BY THE MAYOR THIS 14th DAY OF DECEMBER, 2009**

**SIGNED**

**ATTEST:**

\_\_\_\_\_  
Nikki L. Lesich, Mayor

\_\_\_\_\_  
Julie Krueger, MMC, City Clerk





**CITY of THE DALLES**

313 COURT STREET  
THE DALLES, OREGON 97058

(541) 296-5481 ext. 1122  
FAX: (541) 296-6906

## AGENDA STAFF REPORT

### CITY OF THE DALLES

MEETING DATE:	AGENDA LOCATION:	AGENDA REPORT #
December 14, 2009	Public Hearings 11, A	09-093

**TO:** Honorable Mayor and City Council

**FROM:** Gene E. Parker, City Attorney  
Dick Gassman, Senior Planner

**THRU:** Nolan K. Young, City Manager

**DATE:** December 2, 2009

**ISSUE:** Public hearing for remand of approval for Site Plan #379-08 of Pacland for the construction of a Wal-Mart store.

**RELATED CITY COUNCIL GOAL:** None

**PREVIOUS AGENDA REPORT NUMBERS:** 09-090.

**BACKGROUND:** On October 8, 2009, the Land Use Board of Appeals entered a Final Opinion and Order remanding the City Council's decision for Site Plan #379-08 for the construction of a Wal-Mart store. On November 23, 2009, the City Council considered the written request submitted pursuant to ORS 227.181 by the Applicant to proceed with the remand hearing. Following the presentation of testimony from the public, the applicant, and the petitioners who filed the LUBA appeal, the Council voted to establish the scope of the remand hearing, to be limited to the issues as identified by LUBA in its Final Opinion and Order related to the Chenoweth Interchange, as set forth in the Applicant's written request to proceed.

The Council determined the Applicant would be allowed to present new evidence as set forth in the Applicant's written request to proceed with the remand. The Council also determined that interested parties would be allowed an opportunity to testify regarding any new evidence related

to the 30<sup>th</sup> highest hour volume, which would be presented at the December 14<sup>th</sup> public hearing. In addition, the Council determined that it would allow interested parties an opportunity to present testimony and evidence related to the 30<sup>th</sup> highest hour volume using Saturday as the weekend day for purposes of calculation.

**PROCESS:** The City's Land Use and Development Ordinance does not have any specific provisions establishing guidelines for the conduct of a remand hearing of a decision from LUBA. The applicable process, as established by LUBA and appellate court precedent, is that the local governing body determines the scope of the issue or issues to be discussed at the remand hearing. The local governing body schedules a hearing to allow for public testimony and comment upon the specified issue or issues. The public hearing to take comment and testimony concerning the issues identified by the City Council has been scheduled for December 14, 2009. This hearing is a quasi-judicial hearing.

**ISSUES:** As mentioned previously, the City Council has determined the scope of issues to be considered during the remand hearing, to be limited to those issues identified by LUBA in its Final Opinion and Order. Those issues can be framed as follows:

- 1) Whether the City's findings are sufficient to adequately explain why traffic counts taken on a weekday satisfy the requirement to measure 30<sup>th</sup> highest hour volumes for traffic, when the 30<sup>th</sup> highest hour volume for traffic as measured at the Rowena Automatic Trip Recorder (ATR) occurred on a Sunday afternoon in July.
- 2) Whether additional traffic counts taken on a weekend day may be necessary in order to reach an accurate conclusion as to whether the proposed development will significantly affect the Chenoweth Interchange, and thus require mitigation earlier than that proposed in the DKS Traffic Impact Study, and conditioned by the City.

Any testimony and evidence offered during the public hearing needs to address these two issues. If testimony or evidence is offered which does not address either of these issues, staff will recommend that such testimony or evidence be determined to be irrelevant and out of order, and that the Council not receive such testimony or evidence into the record of the hearing.

In its written request to proceed with the remand, the Applicant indicated it would be submitting evidence explaining why traffic counts taken on a weekday satisfy ODOT's requirements for measuring the 30<sup>th</sup> highest hour volumes for traffic at the Chenoweth Interchange. The Applicant indicated it would also submit proposed findings for the Council's consideration which would adequately explain why traffic counts taken on a weekday satisfy ODOT's requirements regarding the 30<sup>th</sup> highest hour volumes. The Applicant indicated they would be addressing the issue of the necessity to take traffic counts at the Chenoweth Interchange on a weekend using the 30<sup>th</sup> highest hour traffic counts from the Rowena ATR. The Applicant noted this evidence would include Sunday traffic counts, and an assessment whether the proposed development will significantly affect the Chenoweth Interchange, and require mitigation earlier than that previously required by the City.

Enclosed with this agenda staff report is a copy of a memorandum from DKS Associates, with supporting exhibits, dated December 2, 2009, submitted by the Applicant. The analysis in the memorandum was specifically prepared to respond to the two issues cited previously, which are the focus of this hearing. The memorandum contains a detailed analysis of additional facts and rationale to support the Applicant's assertion that there is substantial evidence in the record to support the City's ultimate conclusion that the selection of the weekday p.m. period was appropriate, when the Rowena ATR indicated that a Sunday afternoon was the appropriate analysis period for the 30<sup>th</sup> highest hour volume to determine the impacts at the Chenoweth Interchange. The analysis explains the seven step process used to determine the appropriate 30<sup>th</sup> highest hourly volumes, and why the process used by the Applicant complied with ODOT's requirements for making this determination.

The memorandum also includes a Sunday weekend traffic impact analysis for the Chenoweth Interchange. Three intersections were analyzed for the Sunday peak hour: U.S. 30 (West 6<sup>th</sup> Street)/River Road; I-84 Eastbound Ramp Terminal/River Road; and I-84 Westbound Ramp Terminal/River Road. The Sunday afternoon analysis was performed for both 2010 and 2027 horizon years in order to maintain consistency with the traffic impact study performed for WM3 Inc., and to allow for direct comparison with the prior TIS analysis. As part of the analysis, Sunday afternoon traffic counts were collected and corresponding peak hour trip generation estimates were performed. Since the Sunday counts were collected in October, a seasonal adjustment factor was determined and applied following ODOT methodology in order to estimate peak month conditions.

For the 2010 Sunday peak hour traffic operating conditions for the Chenoweth Interchange, which include both background operating conditions and total operating conditions, the analysis concluded that operating standards were met for both analysis periods. The memorandum concluded that no project mitigations are needed at the Chenoweth Interchange at the time of project build-out. For the 2027 operating conditions for the Chenoweth Interchange, regardless of whether the traffic conditions were analyzed during the weekday p.m. peak hour or the Sunday peak hour, the analysis concluded that mitigations were needed at the U.S. 30 (West 6<sup>th</sup> Street)/River Road intersection. This mitigation consisted of restriping the northbound West 6<sup>th</sup> Street approach to include a 100-foot right turn lane with a taper at River Road (some minor widening may be necessary).

The Applicant's supplemental traffic analysis also noted that mitigation measures for the Chenoweth Interchange ramps were identified in the traffic impact study prepared for WM3, Inc., because they were needed for the weekday p.m. hour. These mitigation measures included the installation of traffic signals at the Eastbound and Westbound ramps for the Chenoweth Interchange. The memorandum noted the mitigated intersection operating conditions were better during the Sunday peak hour at the Chenoweth Interchange intersections, compared to the weekday p.m. peak hour conditions. The memorandum concluded these previously identified mitigation measures would allow the Chenoweth Interchange to meet operating standards with substantial excess capacity during both analysis periods.

City staff has reviewed the additional traffic analysis submitted by the Applicant, and the staff concurs with the conclusion set forth in the analysis that the appropriate analysis period to

determine the project impacts of the proposed development, upon the Chenoweth Interchange, was indeed the weekday p.m. hour. The staff agrees that this finding is supported by both ODOT's design hour determination methodology, and the additional analysis performed for the Sunday peak hour.

Staff believes that the information presented in the Applicant's supplemental traffic analysis, provides the basis for preparing additional findings which can sufficiently explain why traffic counts taken on a weekday satisfy the requirements for ODOT to measure the 30<sup>th</sup> highest hour volume for traffic at the Chenoweth Interchange. Staff also believes that the evidence of the additional Sunday peak hour traffic impact analysis submitted by the Applicant, establishes that impacts from the proposed development upon the Chenoweth Interchange were sufficiently addressed by the mitigation elements previously included in the conditions of approval included in Resolution No. 09-013, and that the evidence in the record will establish there is no need to require that any of the mitigation elements be required to be constructed earlier than was previously required by Resolution No. 09-013.

**BUDGET IMPLICATIONS:** None.

**ALTERNATIVES:**

- A. Staff recommendation. After all of the testimony and evidence concerning the issues in the remand hearing has been presented, and the public hearing has been closed, the Council will need to deliberate and make a decision. Staff recommends that the Council consider the following motion: **Recommended motion:** Move to affirm the City Council's decision to approve Site Plan #379-08 for the construction of a Wal-Mart store, and direct staff to prepare a resolution including supplemental findings of fact and conclusions or law, which would also include the conditions of approval set forth in Resolution No. 09-013, for the City Council's review at a future Council meeting.

## MEMORANDUM

**TO:** Dale McCabe, City of The Dalles  
Rod Cathcart, ODOT Region 4  
Ana Jovanovic, ODOT Region 4  
Marty Matherly, Wasco County

**CC:** Scott Franklin, PacLand  
Greg Hathaway, Davis Wright Tremaine

**FROM:** Scott Mansur, P.E., P.T.O.E. *SM*  
Brad Coy, E.I.T. *BC*

**DATE:** December 2, 2009



**SUBJECT:** Wal-Mart: Additional Traffic Analysis for LUBA Remand P08269-001-000

This memorandum addresses comments from the Land Use Board of Appeal's ("LUBA") Final Opinion and Order, #2009-048, (the "LUBA Decision")<sup>1</sup> related to 30<sup>th</sup> Highest Hour traffic analysis at the I-84/Chenoweth Interchange in The Dalles, Oregon regarding the proposed Wal-Mart store. LUBA indicated that the City's findings failed to adequately explain why the weekday p.m. peak hour analysis, upon which *The Dalles WM3, Inc. Development Transportation Impact Study ("WM3 TIS")*<sup>2</sup> was based, met Oregon Department of Transportation (ODOT) requirements relating to design hour volumes (DHVs). LUBA also determined that "... traffic counts taken at the Chenoweth Interchange on a weekend day may be necessary in order to reach an accurate conclusion about whether the proposed development will significantly affect that interchange, and thus require mitigation earlier than that...conditioned by the City." While the focus of the current development application is the proposed 150,000 square-foot Wal-Mart, the WM3 TIS analysis considered 240,000 total square feet of development on the 25 acre WM3 site, which leaves an additional 90,000 square feet of shopping center for the site.

This memorandum includes a more complete discussion of why the analysis period used in the WM3 TIS, and previously supported by ODOT, the City and County, was appropriate to satisfy ODOT's design hour requirement. In addition, it includes additional analysis for the Sunday peak hour to leave no doubt that the improvements required by the City's approval of Wal-Mart's site plan for the I-84/Chenoweth Interchange will mitigate WM3 project impacts for the proposed 240,000 square-foot shopping center. The nearby US 30/River Road intersection was also included in the analysis due to its close proximity to the Chenoweth interchange.

<sup>1</sup> Wal-Mart LUBA #2009-048 Final Opinion and Order, October 8, 2009

<sup>2</sup> The Dalles WM3, Inc. Development Transportation Impact Study, DKS Associates, September 2007.

Therefore, the following three intersections were analyzed for the Sunday peak hour:

- US 30 (West 6<sup>th</sup> Street)/River Road
- I-84 Eastbound Ramp Terminal/River Road
- I-84 Westbound Ramp Terminal/River Road

## **Appropriate Analysis Period**

The main unresolved concern identified in LUBA's Final Opinion and Order was the City's findings related to the selection by ODOT, the City and County of the weekday p.m. peak hour as the appropriate impact analysis period—during which the 30<sup>th</sup> Highest Hour Volumes (30<sup>th</sup> HV) occur—for the Chenoweth Interchange. The LUBA Decision indicates that the City's findings are not sufficient to explain why the use of the weekday p.m. period is appropriate when the Rowena Automatic Traffic Recorder (ATR) indicates that a Sunday afternoon is the appropriate analysis period for the 30<sup>th</sup> HV to determine impacts at the Chenoweth Interchange that is located on I-84. The basis for using the weekday p.m. peak analysis period as the appropriate 30<sup>th</sup> HV was provided previously in a February 23, 2009 memorandum prepared by DKS Associates<sup>3</sup> and is supplemented by this memorandum.

For developing 30<sup>th</sup> Highest Hour Volumes for the Chenoweth Interchange, the seven ODOT defined steps are identified and described. These steps are highlighted in Figure 1, which is a replication (minus the highlighting) of the ODOT flow chart showing ODOT's defined process for developing 30<sup>th</sup> Highest Hour Volumes, which is contained in the Design Hour Volumes (DHV) section of the ODOT Analysis Procedures Manual (APM).<sup>4</sup> The purpose of this 30<sup>th</sup> HV determination process is to aid in the selection of an appropriate hour for planning, design, and operational analysis purposes with the intent to find "a compromise between providing an adequate level of service (LOS) for every (or almost every) hour of the year and economic efficiency."<sup>5</sup> This purpose was indicated in the *Highway Capacity Manual (HCM) 2000*, which is a publication of the Transportation Research Board (TRB), is based on 50 years of research, and provides key resources used worldwide for current transportation engineering practices.

<sup>3</sup> DKS Associates' Responses to Greenlight Engineering – Regarding WM3 Wal-Mart Development, DKS Associates, February 23, 2009; included in the appendix.

<sup>4</sup> Developing Design Hour Volumes (Chapter 4), ODOT TPAU Analysis Procedures Manual, Last updated July 2009; Sections 4.1 through 4.4 are referenced repeatedly in this memorandum and are attached in the appendix.

<sup>5</sup> Highway Capacity Manual 2000, Page 8-8



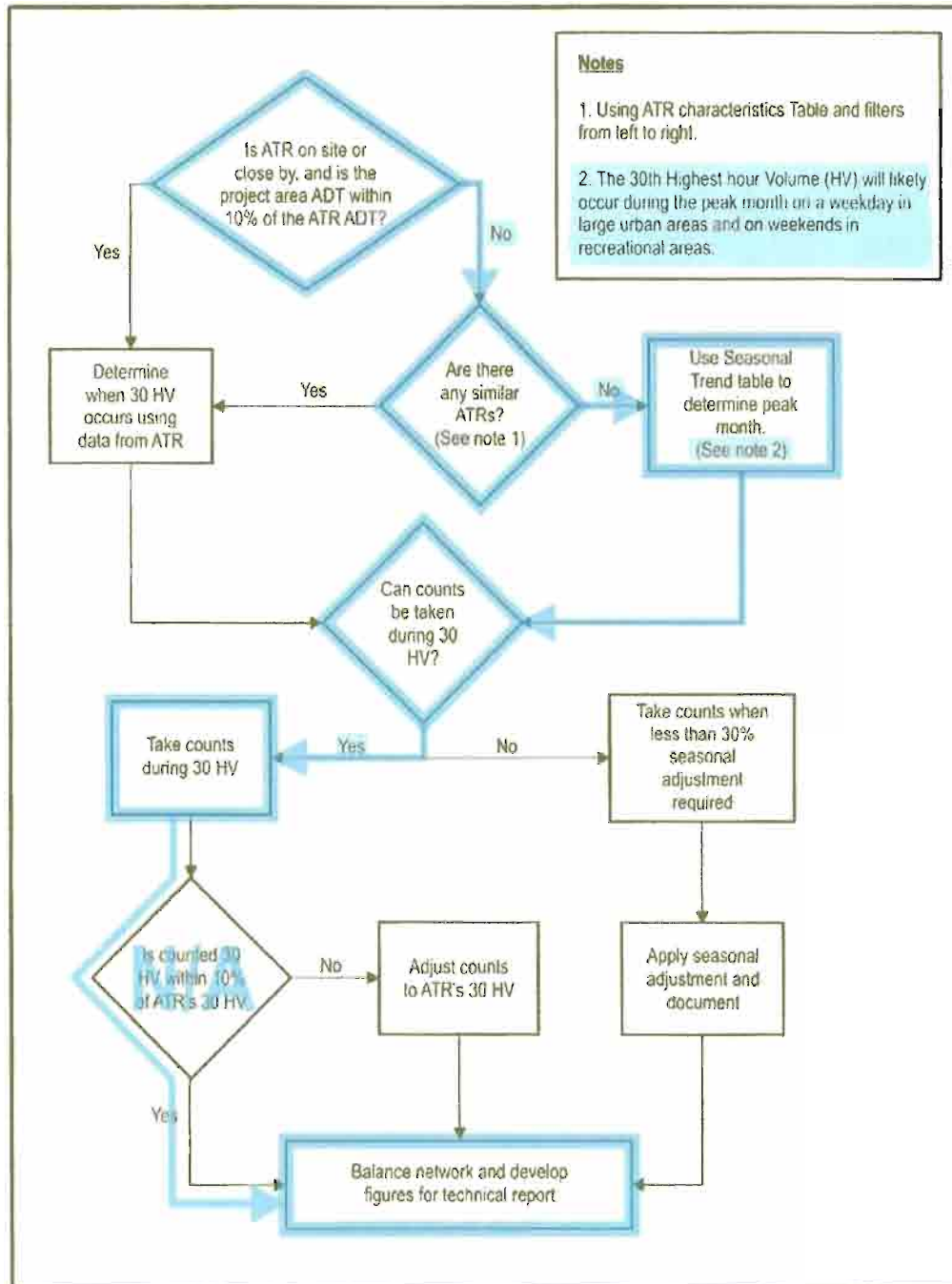


Figure 1: Determination of Appropriate 30<sup>th</sup> Highest Hourly Volumes<sup>6</sup>

<sup>6</sup> From Figure 4-1 Process for Development of 30<sup>th</sup> Highest Hour Volumes, ODOT TPAU *Analysis Procedures Manual*, Last updated July 2009.

1. Is there an ATR on site or close by, and is the average daily traffic (ADT) of the study area roadway (I-84/Chenoweth Interchange ramp terminals) within 10% of the ADT measured by the ATR?

**Answer: No.**

**Discussion:** The purpose of this step is to determine whether there is an existing ATR that has representative trend patterns and volumes as the Chenoweth Interchange ramp terminals and can be used directly to determine the appropriate 30<sup>th</sup> HV. Even though the Rowena ATR is the nearest ATR to the Chenoweth Interchange<sup>7</sup> and is on I-84, the project area ADT (i.e., at the Chenoweth Interchange entrance and exit ramps) is *not* within 10% of the ADT measured at the Rowena ATR. This is primarily because the majority of I-84 traffic remains on the interstate and does not use the Chenoweth Interchange entrance and exit ramps.<sup>8</sup> Therefore, traffic volumes at the Chenoweth interchange ramps consist primarily of traffic accessing local destinations and are only partially influenced by overall I-84 volume fluctuations. According to ODOT interchange ramp volume data, the Rowena ATR has an average annual daily traffic (AADT) level of approximately 19,500 vehicles, while the Chenoweth Interchange ramp terminals have AADT levels of approximately 6,000 vehicles,<sup>9</sup> which is only 30 percent of the Rowena AADT. Therefore, the time period when the 30<sup>th</sup> HV occurs at the study area roadway (Chenoweth Interchange ramp terminals) should not be determined directly from the Rowena ATR. This finding was confirmed by ODOT Region 4 Staff.

It is significant to note that this step was written with all ODOT highways in mind, and that the majority of ODOT highways operate differently from interstates. One main difference is that the majority of ODOT highways do not have grade-separated interchanges but instead have intersections directly on the highway. Therefore, the 30<sup>th</sup> HV at non-interstate highway intersections directly correspond with the 30<sup>th</sup> HV indicated by adjacent ATRs.

2. Are there any similar ATRs? (Note 1 in Figure 1: Using ATR characteristics Table and filters from left to right)

**Answer: No.**

**Discussion:** The purpose of this step is to determine if there is another ATR in the State of Oregon that experiences similar seasonal variation trends as the study area roadway (i.e., Chenoweth Interchange ramp terminals). The most recent ATR

---

<sup>7</sup> The Rowena ATR (33-001) is located on I-84 approximately six miles west of the Chenoweth Interchange.

<sup>8</sup> This is what was meant by the previous February 9 and 23, 2009 memorandums when they indicated that "none of the study intersections are located on *mainline* I-84" (*italics added*); the February 23, 2009 memorandum is included in the appendix.

<sup>9</sup> These estimates are based on the 2008 ODOT Interchange Ramp Volume diagrams (applicable diagrams are included in the appendix). The 6,000 vehicle estimate is based on the fact that each exit and entrance ramp has between 1,200 and 2,200 AADT, River Road has an AADT through volume level of approximately 3,000 vehicles (estimated by multiplying the 300 bi-directional p.m. peak hour through counts at the higher Chenoweth Interchange ramp terminal by a factor of 10, which is standard engineering practice and is supported by the Rowena ATR data), and each ramp terminal has one entrance ramp and one exit ramp and also provides service to River Road through traffic.



Characteristics Table<sup>10</sup> was filtered from left to right using the filters listed in the table below. Explanations of the filters are provided in the applicable section of the APM,<sup>11</sup> which is included in the appendix to this memorandum. There were 147 ATRs, and as the filters were applied left to right, the number of potential matches decreased until there were none left. Therefore, no ATRs matched all appropriate filters, which means there are no similar ATRs that can be used. The ATR Characteristics Table assumptions are summarized in Table 1.

**Table 1: Applicable ATR Characteristics Table Filters for Chenoweth Interchange Ramp Terminals**

Category (from Left to Right)	Selected Filters	Non-Selected Filters	Remaining ATRs
1. Seasonal Traffic Trend	Commuter Interstate Non-Urbanized Summer	Agriculture Coastal Destination Coastal Destination Route Interstate Urbanized Recreational Summer Recreational Summer/Winter Recreational Winter Summer < 2,500	63
2. Area Type	Small Urban (population between 5,000 and 49,999) Small Urban Fringe	Populated Rural Rural Urban Urban Fringe	15
3. Number of Lanes	2, 3, or 4	5 or 6	7
4. Weekly Traffic Trend	Steady Weekday Weekend		7
5. AADT	4,000 to 8,000	< 4,000 > 8,000	0
6. OHP Classification	District Highway Interstate Highway	Regional Highway Statewide Highway	0

3. Use Seasonal Trend table to determine peak month. (Note 2 in Figure 1. The 30<sup>th</sup> HV will likely occur during the peak month on a weekday in large urban areas and on weekends in recreational areas.)

**Finding:** The 30<sup>th</sup> HV occurs during the weekday p.m. peak hour in July.

**Discussion:** The purpose of this step is to determine both the peak month of the year and the peak hour of the week, which are the two separate trends that must be considered when determining the appropriate time period to use for the 30<sup>th</sup> HV.

<sup>10</sup> 2009 ATR Characteristics Table (Printed 06/05/09); available online from ODOT in spreadsheet format: [http://www.oregon.gov/ODOT/TTD/TPAU/A\\_Data.shtml](http://www.oregon.gov/ODOT/TTD/TPAU/A_Data.shtml)

<sup>11</sup> ODOT TPAU APM, Section 4.4. Last Updated 7/2009, pages 49-53; included in appendix.

Discussion of these two trends and how they apply to the Chenoweth Interchange is provided below:

The peak month of the year for the Chenoweth Interchange is primarily influenced by regional traffic trends. Regional traffic at the Chenoweth Interchange includes those who travel to and from The Dalles and the nearby area using the Chenoweth Interchange entrance and exit ramps. These trips occur primarily for tourist purposes or as a rest stop while traveling between eastern and western Oregon on I-84 and are considered to be the main source of seasonal variation in traffic at the Chenoweth Interchange because local traffic during the weekday p.m. peak hour is expected to remain relatively constant throughout the year. Therefore, because the Rowena ATR is along I-84—which primarily services regional traffic—and is also near the Chenoweth Interchange, overall yearly trends at the Rowena ATR are expected to provide a reasonable indication of variation in regional traffic at the Chenoweth Interchange. Because the peak month of the Rowena ATR is July, the peak month at the Chenoweth Interchange is also considered to be July. This finding was confirmed by The Dalles City Engineer, Wasco County Engineer, and ODOT Region 4 Staff. This assumption has also never been questioned.

The Seasonal Trend Table<sup>12</sup> is another tool provided by ODOT for determining seasonal variation. It contains information regarding general traffic patterns for similar highways throughout the state and is helpful when other information is unavailable. It also indicates that the yearly peak occurs in July for the Commuter, Interstate Non-Urbanized, and Summer categories (i.e., the applicable Seasonal Traffic Trend categories identified in Step 2). Therefore, July is clearly the peak month.

The purpose of Note 2 in Figure 1 is to help determine whether the peak hour of the week occurs on a weekday or weekend. On one end of the spectrum are large urban areas (e.g., Portland, Salem, Eugene, Redmond, Bend) where local traffic (especially commuters) and the associated weekday p.m. peak hour volumes are the most significant. On the other end of the spectrum are recreational areas (e.g., Mt. Hood, Black Butte, Sunriver, the Oregon coast) where tourists and recreational users are the most significant. The Chenoweth Interchange ramp terminals fall somewhere in the middle of this spectrum. Two main findings support the conclusion that the Chenoweth Interchange has trends that are more closely associated with a large urban area, thereby resulting in use of the weekday p.m. peak hour as the appropriate peak hour of the week:

- The primary land uses surrounding the Chenoweth Interchange are industrial and residential. Therefore, the Chenoweth Interchange entrance and exit ramps are primarily influenced by local traffic trends consisting of city residents and local employees who work, live, and/or shop in The Dalles (likely in the western end of the city, which is why they use the Chenoweth Interchange).

---

<sup>12</sup> 2009 Seasonal Trend Table; available online from ODOT in spreadsheet format:  
[http://www.oregon.gov/ODOT/TD/TPAU/A\\_Data.shtml](http://www.oregon.gov/ODOT/TD/TPAU/A_Data.shtml)

- The Chenoweth Interchange entrance and exit ramps are not part of a key route to a prime recreational or tourist area, and while there are some nearby recreational amenities accessed by the Chenoweth Interchange entrance and exit ramps (e.g., Columbia Gorge Discovery Center, The Dalles Riverfront Trail, and The Dalles Country Club), these are minor traffic generators.

Therefore, the Chenoweth Interchange ramp terminals have characteristics that are more similar to a large urban area than a recreational area because the majority of traffic using the interchange ramp terminals is local traffic (city residents and local employees who work, live, and/or shop in The Dalles). Therefore, ODOT guidelines indicate that the 30<sup>th</sup> HV should be assumed to occur on a typical weekday during the peak month. This finding is consistent with *The City of The Dalles Traffic Impact Study Guidelines*.<sup>13</sup> The appropriateness of analyzing the weekday p.m. peak hour as the 30<sup>th</sup> HV was also confirmed by The Dalles City Engineer, Wasco County Engineer, and ODOT Region 4 Staff. Furthermore, as additional confirmation, weekend analysis was also performed for the Chenoweth Interchange and is documented later in this memorandum.

In summary, at the Chenoweth Interchange regional trends influence the selection of the peak month of the year (July) while local trends influence the selection of the peak hour of the week (weekday p.m. peak hour). This joint consideration of both local trends (affected primarily by River Road, which is the cross street) and regional trends (affected primarily by I-84, which is the mainline highway) at the Chenoweth Interchange is also consistent with the underlying concept that interchange ramp terminals share characteristics with both the mainline highway and the cross street. This concept is consistent with the ODOT procedure regarding the estimation of a seasonal factor at "interchange ramps, which should use an average of the mainline and cross road seasonal adjustments."<sup>14</sup>

#### **4. Can counts be taken during 30<sup>th</sup> HV?**

**Answer: Yes.**

**Discussion:** Now that the 30<sup>th</sup> HV has been determined, counts should be taken during the 30<sup>th</sup> HV (i.e., peak month and peak hour of the week) if possible. However, if taking counts during the 30<sup>th</sup> HV would cause undue delays, then counts may be taken during the peak hour of the week during a non-peak month, but a seasonal adjustment factor must be applied. One caveat is that the seasonal adjustment factor must be less than 1.30 (i.e., 30 percent). Therefore, there are typically a few months of the year when counts cannot be taken and factored to determine 30<sup>th</sup> HV levels. The WM3 project timeline did accommodate taking the counts during July; therefore, the counts were taken during the peak month (July) on a weekday (Tuesday) p.m. peak hour from 4:00 to 6:00 p.m.

<sup>13</sup> *The City of The Dalles Traffic Impact Study Guidelines*, January 22, 2004.

<sup>14</sup> ODOT TPAU APM, Section 4.4.2, Last Updated 7/2009, page 56; included in appendix.

**5. Take counts during 30<sup>th</sup> HV.**

**Finding:** Counts were taken during the 30<sup>th</sup> HV.

**Discussion:** The appropriate 30<sup>th</sup> HV was determined in steps 1 through 3 to be the p.m. peak hour on a typical weekday in the peak month of July.

**6. Is counted 30<sup>th</sup> HV within 10 percent of ATR's 30<sup>th</sup> HV?**

**Finding:** This step is not applicable (N/A).

**Discussion:** When the appropriate 30<sup>th</sup> HV is determined directly from an on-site ATR (i.e., the answer to Step 1 is "Yes"), then this step provides a back check for consistency. Otherwise it is not applicable. Because the answer to Step 1 was "No," the counts were not compared with an ATR and this step was bypassed.

**7. Balance network and develop figures for technical report.**

**Finding:** Network balanced and figures developed for *WM3 TIS*.

**Discussion:** The final step for determining the appropriate 30<sup>th</sup> HV is to provide documentation of the counts, any applicable seasonal adjustment factors, and balanced 30<sup>th</sup> HV traffic volumes. As indicated previously, no seasonal adjustment factor was needed because the counts were collected during the 30<sup>th</sup> HV. However, minor balancing following ODOT methodology<sup>15</sup> was performed to ensure consistency between adjacent intersections; this was done by rounding volumes up to account for any differences in volumes entering and exiting adjacent intersections. The resulting 30<sup>th</sup> HV volumes to be used for the impact analysis were submitted to ODOT Region 4 Staff, who approved them prior to the preparation of the *WM3 TIS*. The volumes were also documented in the *WM3 TIS* and were the basis of the impact analysis, which was approved by The Dalles City Engineer, Wasco County Engineer, and ODOT Region 4 Staff.

In summary, ODOT methodology for developing 30<sup>th</sup> Highest Hour Volumes (30<sup>th</sup> HV) supports the use of the weekday p.m. peak hour as the 30<sup>th</sup> HV. Therefore, the weekday p.m. peak hour is the most appropriate analysis period at the Chenoweth Interchange. This finding was also confirmed by The Dalles City Engineer, Wasco County Engineer, and ODOT Region 4 Staff. In addition, further support for the use of the weekday p.m. peak hour as the 30<sup>th</sup> HV can be found in the recent *I-84 Chenoweth Interchange Area Management Plan (IAMP)* prepared by a transportation consultant for ODOT, which also came to the same conclusion that the weekday p.m. peak hour is the correct 30<sup>th</sup> HV.<sup>16</sup>

<sup>15</sup> ODOT TPAU APM, Section 4.2.2, Last Updated 7/2009, page 43; included in appendix.

<sup>16</sup> *I-84 Chenoweth Interchange Area Management Plan (IAMP)*, Kittelson and Associates, August 2009 Draft.

### **Saturday versus Sunday 30<sup>th</sup> Highest Hour Comparison for I-84**

At the City Council Meeting on November 23, 2009, it is our understanding that the opponent's attorney requested, and the City Council approved, that the scope of the remand hearing include a 30<sup>th</sup> Highest Hour analysis on a Saturday. The following section discusses why a Saturday analysis would not represent the 30<sup>th</sup> highest hour for I-84 utilizing the Rowena ATR.

In recent years, the 30<sup>th</sup> HV of the Rowena ATR has occurred on a typical Sunday afternoon in the summer. The Analysis by Greenlight Engineering supports this finding; it indicates that in 2007 "the 30<sup>th</sup> highest hour . . . occurred on Sunday, July 29" and that "patterns that occurred in 2007 also occurred in 2006."<sup>17</sup> There was no discussion in the Greenlight report stating that the 30<sup>th</sup> highest hour on I-84 occurred on a Saturday.

The 2007 July data for the Rowena ATR also indicate that the highest Saturday<sup>18</sup> hourly volume in 2007 is approximately 28 percent lower than the 2007 30<sup>th</sup> HV level (2,513 vehicles per hour) that occurred on Sunday, July 29, 2007. Furthermore, there are multiple hours on Sundays in July that are within one percent of the 2007 30<sup>th</sup> HV levels. These hours occur on July 8, July 22, and July 29. Therefore, Rowena ATR data indicate that Saturday peak hour volumes in July are 28 percent lower than 30<sup>th</sup> highest hour levels and Sunday summer peak hour volumes are consistently at 30<sup>th</sup> highest hour levels. Therefore, the 30<sup>th</sup> highest hour for I-84 in the vicinity of the Chenoweth Interchange (as indicated by the Rowena ATR) clearly occurs on a typical Sunday in the summer and not on a Saturday. The Rowena ATR traffic data is provided in the appendix.

### **Additional Sunday Peak Hour Impact Analysis**

In their final opinion LUBA commented "that traffic counts taken at the Chenoweth Interchange on a weekend day may be necessary in order to reach an accurate conclusion about whether the proposed development will significantly affect that interchange."<sup>19</sup> This LUBA finding was based on information provided by Greenlight Engineering, who claimed that the Sunday weekend peak is the appropriate analysis period in which to assess project impacts at the Chenoweth Interchange.<sup>20</sup> Greenlight Engineering based their conclusion on the fact that in recent years, the 30<sup>th</sup> HV of the Rowena ATR has occurred on a typical Sunday afternoon in the summer.

While it is true that in recent years the 30<sup>th</sup> HV of the Rowena ATR has occurred on a typical Sunday afternoon in the summer, the appropriate analysis period at the Chenoweth Interchange is actually the weekday p.m. peak hour (as indicated in the previous section of this memorandum) and not the Sunday weekend peak hour claimed by Greenlight Engineering. However, to leave no doubt that the recommended improvements in the *WM3 TIS* will mitigate WM3 project impacts even during the weekend, additional Sunday weekend traffic impact analysis was performed for the I-84/Chenoweth Interchange. The nearby US 30/River Road intersection was also included in the analysis due to its

<sup>17</sup> *Site Plan Review 379-08 Pacland – Wal-Mart Subdivision 62-08 Chenoweth Station Subdivision*, Letter to the City of The Dalles from Greenlight Engineering, February 6, 2009; included in appendix.

<sup>18</sup> The highest Saturday hourly volume occurred from 1:00 p.m. to 2:00 p.m. on July 21, 2007 (1,962 vehicles per hour, 301<sup>st</sup> highest hour).

<sup>19</sup> Wal-Mart LUBA #2009-048 Final Opinion and Order, October 8, 2009.

<sup>20</sup> *Site Plan Review 379-08 Pacland – Wal-Mart Subdivision 62-08 Chenoweth Station Subdivision*, Letter to the City of The Dalles from Greenlight Engineering, February 6, 2009; included in appendix.

close proximity to the Chenoweth interchange. Therefore, the following three intersections were analyzed for the Sunday peak hour:

- US 30 (West 6<sup>th</sup> Street)/River Road
- I-84 Eastbound Ramp Terminal/River Road
- I-84 Westbound Ramp Terminal/River Road

The Sunday afternoon analysis was performed for both the 2010 and 2027 horizon years in order to maintain consistency with the *WM3 TIS* and allow for direct comparison with the prior *TIS* analysis. To perform the additional analysis, Sunday afternoon traffic counts were collected and corresponding Sunday peak hour trip generation estimates were performed. Since the Sunday counts were collected in October, a seasonal adjustment factor was determined and applied following ODOT methodology in order to estimate peak month conditions.

The Sunday peak hour's seasonally adjusted traffic volumes, trip generation estimates, and resulting intersection operations (both with and without the previously identified project mitigations) are discussed next. All other Sunday peak hour traffic impact analysis assumptions (i.e., trip distribution and routing, yearly growth rate, and analysis years) are consistent with the *WM3 TIS*; therefore, they are not discussed in this memorandum.

### **Seasonally Adjusted Traffic Counts**

Sunday afternoon traffic volumes were collected at the I-84/Chenoweth Interchange vicinity intersections on October 25<sup>th</sup>, 2009. The traffic counts were performed during a four-hour window (1:00 p.m. to 5:00 p.m.) to ensure that the afternoon's peak volumes were captured. Because the traffic counts were not performed during the peak month, a seasonal adjustment factor was applied in order to estimate peak month traffic volumes (the lower right path in Figure 1, which shows the ODOT 30<sup>th</sup> HV determination process, is applicable in this case and the finding of Step 4 would be "no").<sup>21</sup>

ODOT guidelines indicate that the appropriate method for calculating the seasonal adjustment factor at interchange ramps is to use an average of the mainline and cross road seasonal adjustments (in the case of the Chenoweth Interchange, I-84 is the mainline and River Road is the cross road).<sup>22</sup> This method considers both River Road variation (i.e., local trends) and mainline I-84 variation (i.e., regional trends), both of which are important considerations for traffic analysis performed at the Chenoweth Interchange.

The seasonal adjustment factor for River Road was determined using the Seasonal Trend Method<sup>23</sup> (instead of either the On-Site ATR Method or the ATR Characteristic Table Method) because there is no ATR that is representative of River Road at the Chenoweth Interchange ramp terminals (for reasons similar to those discussed earlier in the Applicable Analysis Period section of this memorandum). The Seasonal Trend Method was performed using the 2009 Seasonal Trend Table.<sup>24</sup>

<sup>21</sup> Seasonal Factors (Section 4.4), ODOT TPAU *Analysis Procedures Manual*, Last updated July 2009; included in appendix.

<sup>22</sup> ODOT TPAU APM, Section 4.4.2, Last Updated 7/2009, page 56; included in appendix.

<sup>23</sup> ODOT TPAU APM, Section 4.4.2, Last Updated 7/2009, page 56; included in appendix.

<sup>24</sup> 2009 Seasonal Trend Table; available online from ODOT in spreadsheet format:

[http://www.oregon.gov/ODOT/TD/TPAU/A\\_Data.shtml](http://www.oregon.gov/ODOT/TD/TPAU/A_Data.shtml)

The two applicable categories are Commuter and Summer given the mix of local and regional traffic on River Road at the Chenoweth Interchange ramp terminals. By averaging the Commuter and Summer categories and interpolating for October 25<sup>th</sup>, the seasonal adjustment factor for River Road was determined to be 1.12 (calculation details are included in the appendix).

The seasonal adjustment factor for mainline I-84 (i.e., the entire interstate and not just the ramps) was determined from the Rowena ATR using the On-Site ATR Method.<sup>25,26</sup> To follow the "On-Site ATR Method," the seasonal adjustment factor (i.e., the ratio of the recorded daily volumes occurring during the peak month versus the count month) was estimated using the last five years of ATR data. The daily volumes are reported as a "percent of ADT" and are provided by ODOT in their yearly ATR Trend Summaries.<sup>27</sup> The last five years of Rowena ATR data for the peak month (either July or August) and the two months straddling the count date (October and November) are listed in Table 2. To determine the seasonal factor, the highest and lowest percents were dropped and the average was calculated using the remaining percentages. Because these percentages correlate with the 15<sup>th</sup> of each month, interpolation was needed to determine the applicable factor for October 25<sup>th</sup>. As shown in Table 2, the seasonal factor (i.e., the ratio between the "percent of ADT" for the peak month and the count date) for I-84 was determined to be 1.22.<sup>28</sup>

**Table 2: Seasonal Factor for October Traffic Counts (Using Rowena ATR)**

Month	Percent of ADT						Seasonal Factor
	2008	2007	2006	2005	2004	Average <sup>a</sup>	
<b>Peak</b>							
July	120	120	120 <sup>a</sup>	124 <sup>a</sup>	123	121.0	
August	122	123	120 <sup>a</sup>	123 <sup>a</sup>	122	122.3	
<i>Higher of the two Months</i>						<b>122.3</b>	
<b>Count</b>							
October	102	102	101	99 <sup>a</sup>	103 <sup>a</sup>	101.7	
November	99	96	96 <sup>a</sup>	100 <sup>a</sup>	98	97.7	
<i>Oct. 25<sup>th</sup> (Interpolated)</i>						<b>100.4</b>	
							$\frac{122.3}{100.4} = 1.22$

<sup>a</sup> Shaded cells represent the highest and lowest data points for the associated month that were not included in the average calculation.

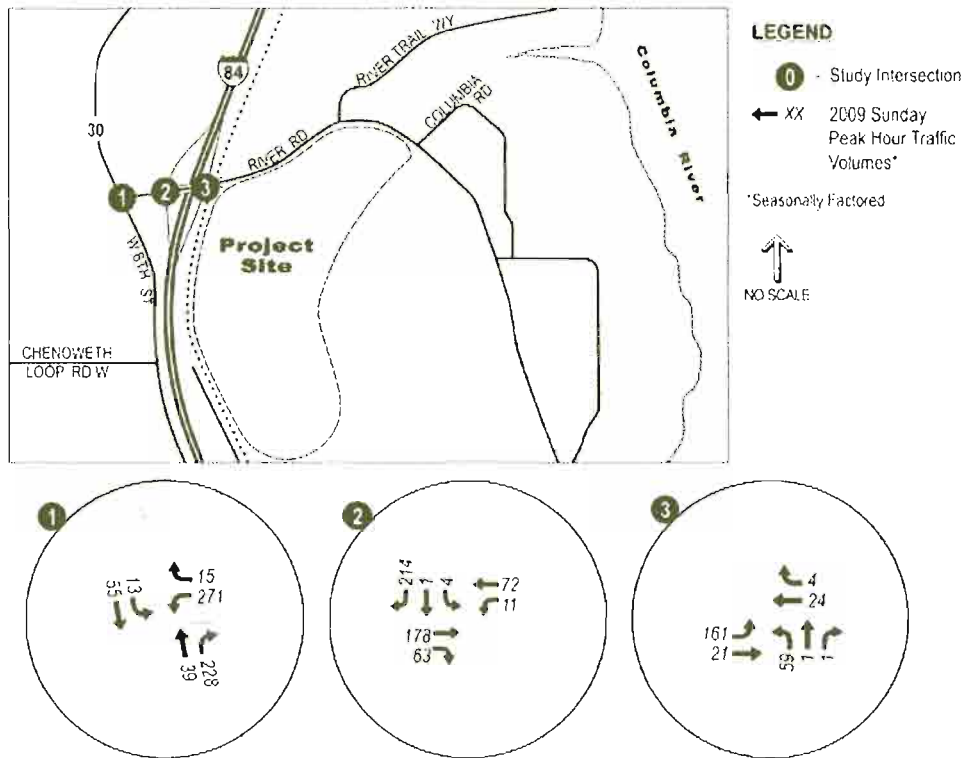
The average of the I-84 and River Road seasonal adjustment factors is 1.17 (i.e., the average of 1.22 and 1.12); however, to be conservative in the Sunday weekend analysis, a seasonal adjustment factor of 1.22 was used instead. By multiplying the 1.22 seasonal factor by the October intersection counts, traffic volumes were estimated for the 2009 Sunday afternoon peak month analysis period. These traffic volumes are shown in Figure 2.

<sup>25</sup> AADT estimates are based on the 2008 ODOT Interchange Ramp Volume diagrams; applicable diagrams are included in the appendix and found at <http://www.oregon.gov/ODOT/TD/TDATA/tsm/tvt.shtml>

<sup>26</sup> ODOT TPAU APM, Section 4.4, Last Updated 7/2009, pages 46-49; included in appendix.

<sup>27</sup> ATR Trend Summaries are found at <http://www.oregon.gov/ODOT/TD/TDATA/tsm/tvt.shtml>

<sup>28</sup> The seasonal factor is less than the maximum 1.30 seasonal factor allowed by ODOT procedures. A factor greater than 1.30 is considered too high because it indicates that a count was not taken at or close to the time the 30<sup>th</sup> H/V occurs.



**Figure 2: 2009 Sunday Peak Hour Traffic (Seasonally Factored)**

To provide a comparison of the Sunday peak hour counts and the weekday p.m. peak hour counts, two years of 2.3% yearly growth was applied to the 2007 weekday p.m. peak hour counts from the *WM3 TIS*. The seasonally factored 2009 Sunday peak hour counts and the estimated 2009 weekday p.m. peak hour counts are shown in Table 3. As shown, the Sunday and weekday p.m. peak hour traffic volumes are very similar, though the aggregate Chenoweth Interchange volumes are slightly higher during the weekday p.m. peak hour due primarily to the higher volumes entering and exiting the Chenoweth Interchange area on River Road east of the ramps.

**Table 3: Link Volume Comparison of the Sunday and Weekday P.M. Peak Hours (2009)**

Count Date	Factor	Volume Comparison					
		River Rd (west of ramps) <sup>a</sup>	River Rd (east of ramps) <sup>a</sup>	I-84 EB Exit Ramp	I-84 EB Entrance Ramp	I-84 WB Exit Ramp	I-84 WB Entrance Ramp
Tuesday July 10, 2007	1.046 (Growth Factor)	503	157	184	88	67	135
Sunday Oct. 25, 2009	1.22 (Seasonal Factor)	527	50	219	74	61	165

<sup>a</sup> River Road volumes consists of bi-directional traffic (i.e., entering and exiting the Chenoweth Interchange area).



### Existing Intersection Operations

The 2009 existing Sunday peak hour traffic operating conditions at the Chenoweth Interchange were determined using 2000 *Highway Capacity Manual* methodology.<sup>29</sup> The performance measures include the estimated delay, level of service (LOS), and volume to capacity (V/C) ratios of the study intersections. The operating conditions are listed in Table 4. As shown in the table, all intersections currently meet operating standards.

**Table 4: Chenoweth Interchange Intersection Operating Conditions (2009 Sunday Peak)**

Chenoweth Interchange Intersection	Operating Standard	2009 Sunday Peak Hour		
		Delay	LOS	V/C
US 30 (W 6 <sup>th</sup> St)/River Rd	0.85 V/C	13.5	A/B	0.43
I-84 EB Ramps/River Rd	0.75 V/C	9.9	A/A	0.25
I-84 WB Ramps/River Rd	0.75 V/C	13.2	A/B	0.14

Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement (typically a minor movement)  
 LOS = Level of Service of Major Street/Minor Street  
 V/C = Volume-to-Capacity Ratio of Worst Movement (typically a minor movement)  
 Bold values do not meet standards.

### Trip Generation

Trip generation consists of estimating the number of vehicles added to the roadway network by the development for a given analysis period. Sunday afternoon peak hour trip generation for the WM3 development was performed using the applicable shopping center trip generation rate of 3.12 trips per 1,000 square feet of gross leasable area. This rate was obtained from the Institute of Transportation Engineers (ITE) *Trip Generation, 8<sup>th</sup> Edition*<sup>30</sup> consistent with standard transportation engineering practices.<sup>31</sup> Based on the proposed 240,000 square-foot shopping center land use, the WM3 site is expected to generate 749 (367 in/382 out) Sunday peak hour trips, as shown in Table 5.

**Table 5: WM3 Sunday Peak Hour Trip Generation Estimates**

Land Use (ITE Code)	Size (SQFT)	Sunday Peak Hour Trip Generation	
		Rate, trips/1,000 SQFT	Total Trips (In/Out)
Shopping Center (820)	240,000	3.12	749 (367/382)

Because the WM3 development is a retail site, not all project trips are new vehicles being added to the roadway network. Those that are new vehicles are called "primary trips," while those that would already be in the area and that choose to stop at the development in route to their predetermined destinations are referred to as either "pass-by trips" (already on the adjacent roadway) or "diverted trips" (on nearby roadways and have to adjust their usual routing to visit the site). Similar pass-by and diverted trip assumptions were used for Sunday peak hour analysis as previously documented in

<sup>29</sup> 2000 *Highway Capacity Manual*, Transportation Research Board, Washington DC, 2000.

<sup>30</sup> *Trip Generation, 8<sup>th</sup> Edition*, Institute of Transportation Engineers, 2008, Land Use Code 820, Sunday peak hour of generator; the rate was used because no equation is provided

<sup>31</sup> When an analysis period has been selected, the corresponding trip generation rate should also be used to appropriately account for period-specific traffic characteristics (i.e., because the analysis is for the Sunday peak hour, the appropriate trip generation rate to use is the Sunday peak hour rate).

the *WM3 TIS*, however one difference is that a lower combined pass-by and diverted trip percentage (26% instead of 34%) was used to be consistent with weekend pass-by data provided in the *ITE Trip Generation Handbook*.<sup>32</sup> The breakdown of Sunday peak hour project trips by trip type is shown in Table 6. It should be noted that the 180 Sunday peak hour diverted project trips make up approximately seven percent of the 30<sup>th</sup> highest hourly volumes on I-84.

**Table 6: WM3 Sunday Peak Hour Trip Generation Breakdown by Trip Type**

Trip Type	Sunday Peak Hour Trip Breakdown		
	In	Out	Total
Primary Trips	270	285	555
Pass-By Trips	7	7	14
Diverted Trips	90	90	180
<b>Total Trips (3.12 trips/1,000 ft<sup>2</sup>)</b>	<b>367</b>	<b>382</b>	<b>749</b>

The routing of WM3 primary and diverted project trips through the Chenoweth Interchange is shown in Figure 3. Only primary and diverted trips use the Chenoweth Interchange because pass-by trips only occur at the project driveways. One item of note in the figure is that vehicles are subtracted from the northbound left and southbound right movements at the Chenoweth Interchange exit ramps to account for the portion of diverted trips that were already using the Chenoweth Interchange ramps. These vehicles would have turned to head west but instead turn to head east to access the site (and then once they leave the site, these vehicles then head westbound over the Chenoweth Interchange to continue their trip).

<sup>32</sup> *Trip Generation Handbook Second Edition*, Institute of Transportation Engineers, June 2004, Chapter 4.

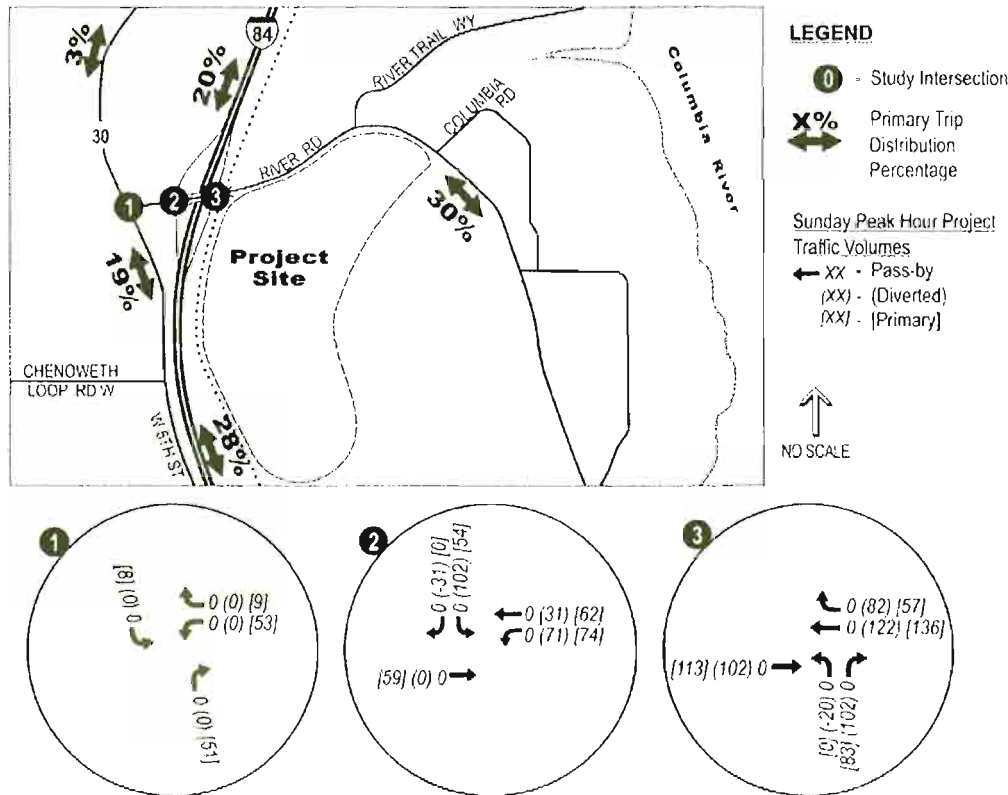


Figure 3: Project Traffic (Sunday Peak Hour)

### 2010 Traffic Volumes and Intersection Operations

Sunday peak hour traffic volumes were projected for the 2010 horizon year using the same 2.3% yearly background growth rate assumed in the *WM3 TIS*. Because the counts were collected in 2009, one year of background traffic growth was added to the seasonally factored counts in order to determine 2010 background traffic volumes. Then, project traffic was added to obtain 2010 total traffic volumes. The 2010 background and total Sunday peak hour traffic volumes are shown in Figure 4.

The 2010 Sunday peak hour traffic operating conditions at the Chenoweth Interchange were then determined and are listed in Table 7. As shown, operating standards are met for both analysis periods. Therefore, no project mitigations are needed at the Chenoweth Interchange at the time of project build-out.

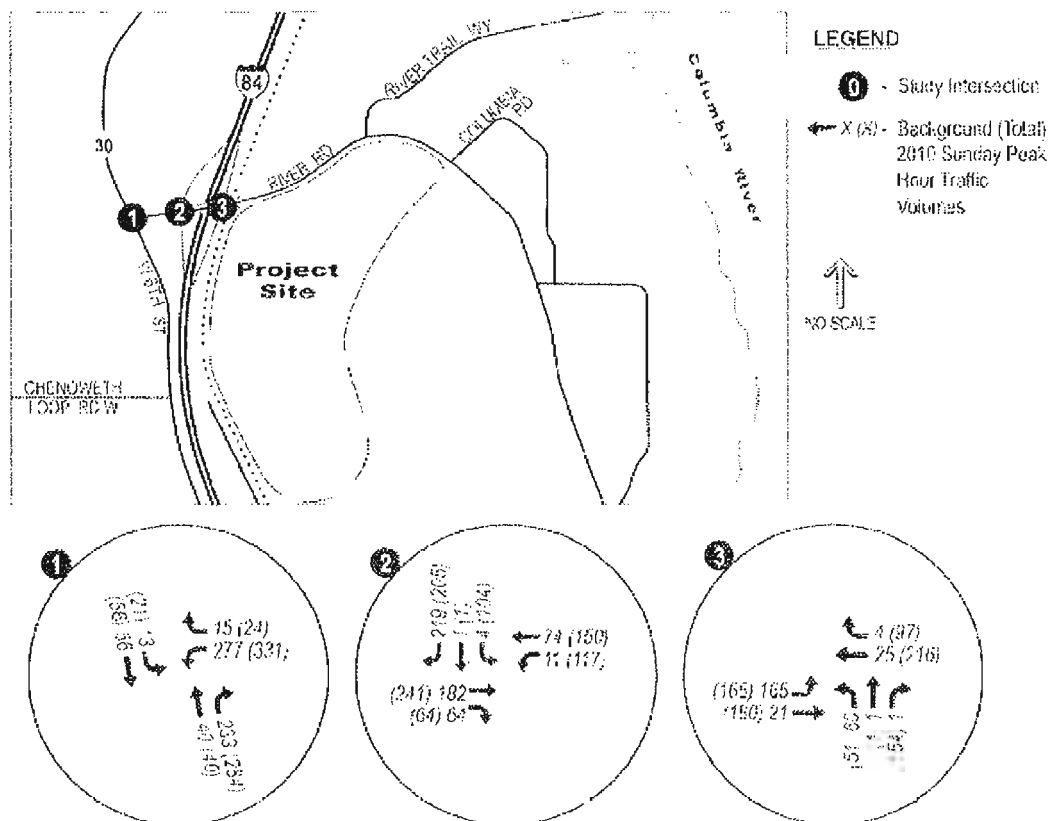


Figure 4: 2010 Background and Total Sunday Peak Hour Traffic

Table 7: Chenoweth Interchange Operating Conditions (2010 Background and Total)

Chenoweth Interchange Intersection	Operating Standard	2010 Sunday Peak Hour (Unmitigated)		
		Delay	LOS	V/C
Background Operating Conditions				
US 30 (W 6 <sup>th</sup> St)/River Rd	0.85 V/C	13.8	A/B	0.44
I-84 EB Ramps/River Rd	0.75 V/C	10.0	A/A	0.25
I-84 WB Ramps/River Rd	0.75 V/C	13.4	A/B	0.15
Total Operating Conditions				
US 30 (W 6 <sup>th</sup> St)/River Rd	0.85 V/C	16.7	A/C	0.56
I-84 EB Ramps/River Rd	0.75 V/C	14.0	A/B	0.34
I-84 WB Ramps/River Rd	0.75 V/C	17.9	A/C	0.44

Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement (typically a minor movement)  
LOS = Level of Service of Major Street/Minor Street

V/C = Volume-to-Capacity Ratio of Worst Movement (typically a minor movement)  
**Bold values do not meet standards.**

### 2027 Traffic Volumes and Intersection Operations

Sunday peak hour traffic volumes were also projected for the 2027 horizon year using a 2.3% yearly background growth rate. Eighteen years of background traffic growth were added to the seasonally factored counts in order to determine 2027 background traffic volumes. Then, project traffic was added to obtain 2027 total traffic volumes. The 2027 background and total Sunday peak hour traffic volumes are shown in Figure 5.

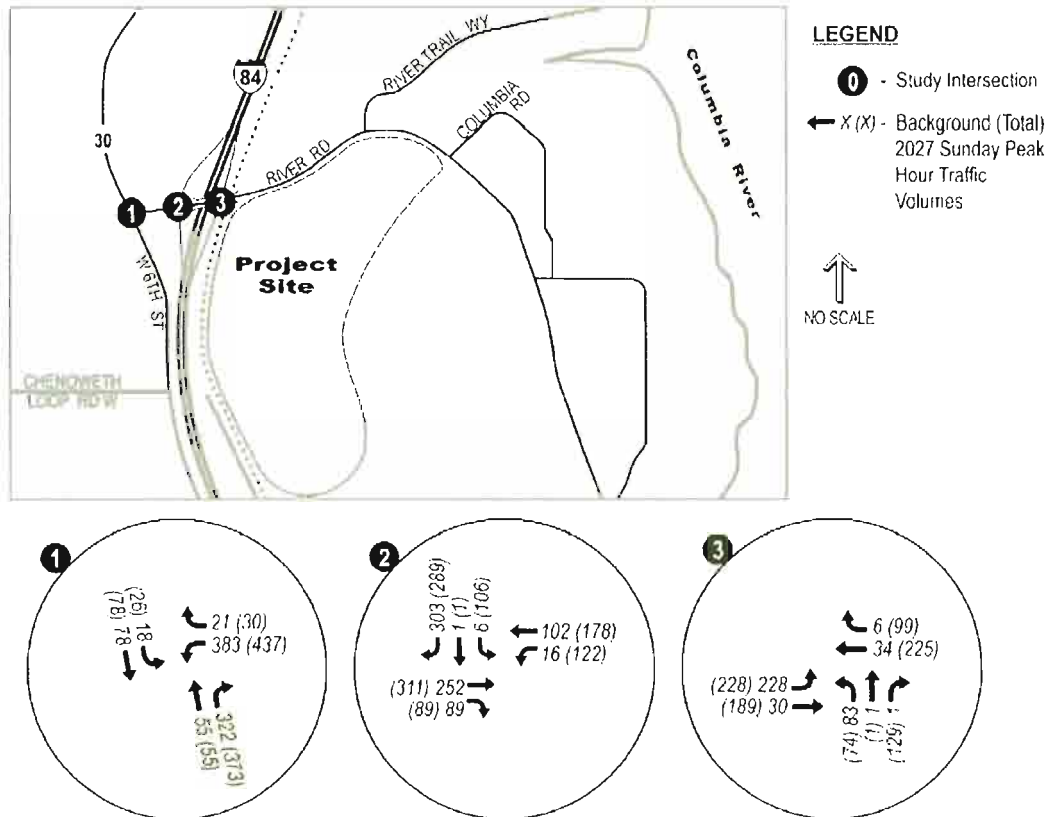


Figure 5: 2027 Background and Total Sunday Peak Hour Traffic

The 2027 Sunday peak hour traffic operating conditions at the Chenoweth Interchange are listed in Table 8. As shown, operating conditions at the US 30 (West 6<sup>th</sup> Street)/River Road intersection would be slightly worse than the operating standard. However, operating conditions at the two I-84 interchange ramps meet standards during the Sunday peak hour and would not require mitigation.

**Table 8: Chenoweth Interchange Operating Conditions (2027 Background and Total)**

Chenoweth Interchange Intersection	Operating Standard	2027 Sunday Peak Hour (Unmitigated)		
		Delay	LOS	V/C
Background Operating Conditions				
US 30 (W 6 <sup>th</sup> St)/River Rd	0.85 V/C	22.7	A/C	0.70
I-84 EB Ramps/River Rd	0.75 V/C	11.1	A/B	0.37
I-84 WB Ramps/River Rd	0.75 V/C	17.9	A/C	0.27
Total Operating Conditions				
US 30 (W 6 <sup>th</sup> St)/River Rd	0.85 V/C	36.1	A/E	<b>0.86</b>
I-84 EB Ramps/River Rd	0.75 V/C	15.9	A/C	0.42
I-84 WB Ramps/River Rd	0.75 V/C	33.7	A/D	0.68
Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement (typically a minor movement)		V/C = Volume-to-Capacity Ratio of Worst Movement (typically a minor movement)		
LOS = Level of Service of Major Street/Minor Street		<b>Bold values do not meet standards.</b>		

### **2027 Mitigated Intersection Operations**

Regardless of whether 2027 total traffic conditions are analyzed during the weekday p.m. peak hour or the Sunday peak hour, mitigations are needed at the US 30 (West 6<sup>th</sup> Street)/River Road intersection. The *WM3 TIS* identified the following mitigation measure at this intersection:

- **US 30 (West 6<sup>th</sup> Street)/River Road:** Restripe northbound W. 6<sup>th</sup> Street approach to include a 100-foot right turn lane with taper at River Road (some minor widening may be necessary).

Mitigation measures for the Chenoweth Interchange ramps were also identified in the *WM3 TIS* because they were needed for the weekday p.m. peak hour. Even though they are not needed for the Sunday peak hour, the following mitigation measures were analyzed to provide additional comparison between the weekday p.m. peak hour and the Sunday peak hour:

- **I-84 Eastbound Ramp Terminal/River Road:** Install traffic signal.
- **I-84 Westbound Ramp Terminal/River Road:** Install traffic signal.

The intersection operating conditions resulting from these mitigations are listed in Table 9 for both the weekday p.m. peak hour (as reported in the *WM3 TIS*) and the Sunday peak hour to provide a comparison with the *WM3 TIS* analysis results. For comparison purposes, the unmitigated 2027 total operating conditions were also provided. As shown, the mitigated intersection operating conditions are better during the Sunday peak hour at the Chenoweth Interchange intersections than the weekday p.m. peak hour. It is also clear that the previously identified mitigations allow the Chenoweth Interchange to meet operating standards with substantial excess capacity during both analysis periods.

**Table 9: Chenoweth Interchange Intersection Operating Conditions Summary (2027 Total)**

Mitigation by Chenoweth Interchange Intersection	2027 Total Intersection Operating Conditions					
	Weekday P.M. Peak Hour			Sunday Peak Hour		
	Delay	LOS	V/C	Delay	LOS	V/C
<b>US 30 (W 6th St)/River Rd (0.85 V/C Operating Standard)</b>						
Unmitigated (Unsignalized)	36.5	A/E	<b>0.86</b>	36.1	A/E	<b>0.86</b>
Restripe NB approach to include 100-foot right turn lane (Unsignalized)	17.0	A/C	0.64	16.0	A/C	0.60
<b>I-84 EB Ramps/River Rd (0.75 V/C Operating Standard)</b>						
Unmitigated (Unsignalized)	>50	A/F	<b>0.94</b>	15.9	A/C	0.42
Install Traffic Signal	13.2	B	0.44	14.9	B	0.41
<b>I-84 WB Ramps/River Rd (0.75 V/C Operating Standard)</b>						
Unmitigated (Unsignalized)	42.2	B/E	<b>0.78</b>	33.7	A/D	0.68
Install Traffic Signal	13.3	B	0.55	10.2	B	0.42
<b>Signalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) LOS = Level of Service of Intersection V/C = Volume-to-Capacity Ratio of Intersection Bold values do not meet standards.						
<b>Unsignalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement (typically a minor movement) LOS = Level of Service of Major Street/Minor Street V/C = Volume-to-Capacity Ratio of Worst Movement (typically a minor movement)						

## Summary

In summary, the appropriate analysis period to determine WM3 project impacts at the Chenoweth Interchange was indeed the weekday p.m. peak hour. This finding is supported by both ODOT's design hour determination methodology and additional analysis performed for the Sunday peak hour.

Since the weekday p.m. peak hour is the critical analysis period, the prior improvements that were identified at the Chenoweth Interchange are still recommended. These improvements include:

- **US 30 (West 6<sup>th</sup> Street)/River Road:** Restripe northbound W. 6<sup>th</sup> Street approach to include a 100-foot right turn lane with taper at River Road (some minor widening may be necessary).
- **I-84 Eastbound Ramp Terminal/River Road:** Install traffic signal.
- **I-84 Westbound Ramp Terminal/River Road:** Install traffic signal.

The developer has previously been conditioned to provide a financial assurance that the above improvements will be constructed when warranted as was set forth in the City of The Dalles Resolution No. 09-013.

## **Appendix**

---

**DKS Memorandum – February 23, 2009**

**ODOT TPAU Analysis Procedures Manual Sections 4.1–4.4**

**Rowena ATR Information**

**Greenlight Engineering Letter – Applicable Pages of February 6, 2009 Letter and Appendix**

**Traffic Counts – Sunday Peak Hour**

**Seasonal Adjustment Factor Calculations**

**Level of Service Descriptions**

**HCM Analysis – Existing**

**HCM Analysis – 2010**

**HCM Analysis – 2027**

**HCM Analysis – 2027 Mitigated**



## **DKS Memorandum – February 23, 2009**

**MEMORANDUM**

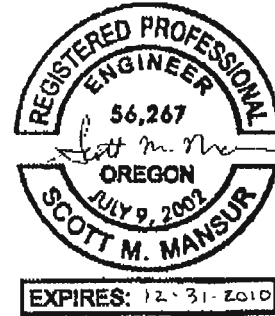
**TO:** Dale McCabe, City Engineer, City of The Dalles

**CC:** Scott Franklin, PacLand  
Jeff Evans, Davis Wright Tremaine

**FROM:** Scott Mansur, P.E., P.T.O.E. *Sm*  
Brad Coy, E.I.T. *BC*

**DATE:** February 23, 2009

**SUBJECT:** DKS Associates' Responses to Greenlight Engineering –  
Regarding WM3 Wal-Mart Development



P08269-000-000

This memorandum is similar to a February 9, 2009, memorandum<sup>1</sup> that provided DKS Associates' responses to transportation comments provided by Greenlight Engineering that was submitted for the subdivision application. The only difference between this memorandum and the February 9, 2009, memorandum is the sight distance response on page 5.

In their letter<sup>2</sup> dated February 6, 2009, Greenlight Engineering raised several concerns relating to *The Dalles WM3, Inc. Development Transportation Impact Study* (WM3 TIS) prepared by DKS Associates in September of 2007.<sup>3</sup> DKS Associates does not agree with the Greenlight Engineering findings, and clarifications and rebuttals to the transportation issues presented by Greenlight Engineering are provided below.

**DKS Response to "Little Room for Error"**

The picture painted by Greenlight Engineering regarding "little room for error" is biased. They use as support for their argument that the I-84 EB Off-ramp/River Road intersection operates at a 0.72 V/C ratio under the 2010 unmitigated scenario. This does not account for the TIS findings that 17 years later under the 2027 mitigated operations, this intersection would actually have a V/C ratio of 0.44 based on the improvements conditioned on the development.<sup>4</sup>

Furthermore, the purpose of mobility standards is to provide a minimum desired level of intersection operations. In more rural communities, such as The Dalles, operating standards are often much lower than urban areas to reflect the desire for less congested conditions and driver expectations. Volume to capacity (V/C) ratio operating standards of 0.75 and 0.85 are very

<sup>1</sup> DKS Associates' Responses to Greenlight Engineering – Regarding WM3 Wal-Mart Development, DKS Associates, February 9, 2009.

<sup>2</sup> Site Plan Review 379-08 PacLand – Wal-Mart Subdivision 62-08 Chenoweth Station Subdivision, Letter by Rick Nys (Greenlight Engineering) to Richard Gassman (City of The Dalles), February 6, 2009.

<sup>3</sup> The Dalles WM3, Inc. Development Transportation Impact Study, DKS Associates, September 2007.

<sup>4</sup> WM3 TIS, Table 18

conservative (V/C standards in the Portland Metropolitan area can be as high as 0.99). In addition, the 0.75 V/C ratio operating standard at the I-84 off-ramp/Chenoweth Road intersection is a temporary standard. The actual V/C standard was 0.85 prior to WM3/City/ODOT development agreement, in which the Oregon Department of Transportation (ODOT) requested that the standard be lowered to 0.75 to provide an additional 13% factor of safety until the Interchange Area Management Plan (IAMP) for the Chenoweth interchange can be completed.<sup>5</sup>

Therefore, factors of safety have already been built into the required operating standards at the Chenoweth Interchange area and meeting these standards (or mitigating back to pre-project conditions when standards are exceeded under expected future background conditions) is sufficient to mitigate development impacts with a significant margin of error.

### DKS Response to "Trip Generation Calculated Incorrectly"

It is agreed that a simple error was made when reporting the trip generation estimates for the WM3 development; however, it is not the same error indicated by Greenlight Engineering nor does it have the same implications. In fact, no change in the analysis is required because the error does not change the number of PM peak hour trips to be generated by the development. Instead, the error was that an incorrect development size and PM peak hour trip rate was reported. Instead of being 260,000 square feet of gross floor area, the proposed development should have been reported as only consisting of 240,000 square feet with an associated rate of 4.65 PM peak hour trips per 1,000 square feet. When updated, Table 9 from the TIS is as follows.

**UPDATED TABLE 9: WM3 New Trip Generation Estimate**

Land Use (ITE Code)	Size (SQFT)	PM Peak Hour Trips*	PM Peak Hour Generation Rate** (trips/1,000 SQFT)
		Total (In/Out)	
Shopping Center (820)	240,000	1,116 (536/580)	4.65

\*Based on ITE equation:  $\ln(\text{PM Peak Hour Trips}) = 0.66 * \ln(\text{KSF}) + 3.40$

\*\*Back-calculated based on trips and size

While we apologize for the error and the resulting misinformation regarding potential development size that was provided in the traffic study, this error has absolutely no effect on the current subdivision application, which only includes 150,000 square feet of development (approximately 90,000 square feet fewer square feet than was assumed in the traffic study).

Regarding future development on the project site, until the Chenoweth Interchange Area Management Plan is completed by ODOT and the I-84 off-ramp/Chenoweth Road intersection operating standard is readjusted to the typical 0.85 V/C threshold, it is recommended that only 240,000 square feet of total gross floor area be allowed on the WM3 site as a condition of approval for the development site as a whole. This will ensure that the impacts indicated in the TIS are accurate.

<sup>5</sup> Wording in the development agreement is as follows: "Capacity at the Chenoweth Interchange will be reserved to allow existing undeveloped industrial lands to develop out during the planning period. ODOT will reserve this capacity by amending the OHP to establish a performance standard of a V/C ratio of 0.75 for the Chenoweth Interchange ramp intersections at River Road."

### **DKS Response to "30th Highest Hour Not Evaluated as Required"**

Because traffic volumes vary widely throughout the year, the typical practice is to analyze transportation facilities under their "30<sup>th</sup> Highest Hourly Volumes" (30<sup>th</sup> HV). When estimating 30<sup>th</sup> HV, many factors come into play, including: local traffic patterns, surrounding land uses, and regional traffic trends. Because all of these factors must be considered, coordination with City, County, and ODOT regional traffic engineers is essential due to their local knowledge of traffic patterns and their understanding of transportation policies and procedures. The 30<sup>th</sup> HV time period for the WM3 TIS study intersections was determined in close coordination with the City of The Dalles, Wasco County, and ODOT Region 4. The selection of the TIS analysis count period was reviewed and found satisfactory before analysis was performed.

A review of the process that was followed for the selection of the TIS analysis count period will clarify why the WM3 Development TIS does provide the appropriate design hour volumes and why the 30<sup>th</sup> highest hour methodology suggested by Greenlight Engineering is inappropriate.

First, it must be understood how local traffic patterns differ from the interstate freeway traffic patterns provided by the ODOT Automatic Traffic Recorder (ATR) located on I-84 west of The Dalles. *The City of The Dalles Traffic Impact Study Guidelines* specify that a weekday PM peak hour analysis is typically appropriate. The Dalles City Engineer selected the weekday PM peak hour as the critical peak period within the City of The Dalles because of his knowledge that it is during the weekday PM peak hour that traffic volumes at City intersections consistently reach their peak levels. This assumption was confirmed with the City Engineer during the TIS scoping.

A second consideration for the analysis period is the surrounding land uses, which are principally industrial uses and generate little to no traffic during the weekend. The third consideration is the yearly traffic fluctuation, which is typically most impacted by regional traffic patterns due to the fact that local employment-related traffic patterns stay relatively consistent throughout the year. Therefore, while the critical peak period during the week is the weekday PM peak hour, the critical time (or peak month) of the year is best determined by considering regional trends.

In the WM3 TIS, the 30<sup>th</sup> Highest Hourly Volumes (30<sup>th</sup> HV) were collected during the weekday PM peak hour during the month of July (which is the peak month). The study reports, "Detailed seasonal traffic volume data for the Rowena ATR determined that the peak month occurred during July." The Rowena ATR referred to is located on I-84 and provides a good representation of overall regional traffic patterns. However, a detailed analysis of hour-by-hour traffic patterns at the Rowena ATR is inappropriate for determining 30<sup>th</sup> HV at the TIS study intersections because the main contributors to intersection volumes are the local traffic generators (not I-84). If the study intersections were actually located on the mainline interstate, then the hour-by-hour analysis methodology outlined by Greenlight Engineering would be applicable. However, none of the study intersections are located on mainline I-84; therefore, study intersection volumes do not correlate directly with the Rowena ATR volumes. Instead the Rowena ATR is only helpful for determining the peak month of the year.<sup>6</sup> This assumption was confirmed by ODOT staff.

---

<sup>6</sup> When study intersections are located directly on a state highway, then an hour-by-hour analysis of data collected on one of that highway's nearby ATRs is appropriate. For example, Highway 20 in Central Oregon runs through downtown Sisters and traffic fluctuations measured at the nearby Sisters ATR directly impact city intersections. Therefore, the appropriate 30<sup>th</sup> HV for Highway 20 intersections in Sisters can be determined by considering the hourly volumes collected at the Sisters ATR.

It should be noted that the 30<sup>th</sup> highest hour provided by the Rowena ATR and recommended by Greenlight correlates to a Sunday in July from 3:00 to 4:00 p.m. Having grown up in Hood River and The Dalles and observing numerous hours of traffic the past few years during the weekday and weekends, it is clear that the Sunday traffic volumes from 3:00 to 4:00 p.m. at the study area intersections would be significantly lower than the traffic volumes analyzed in the WM3 Transportation Impact Study. This assumption was also verified by the City Engineer who has a clear understanding of the traffic volumes in the City of The Dalles.

### **DKS Response to "Key Intersections Excluded"**

Prior to performing the WM3 TIS, a memorandum documenting the scope and key assumptions of the study was provided to the City of The Dalles, Wasco County, and ODOT Region 4 for review.<sup>7</sup> This memorandum included a list of the eight study intersections that were to be analyzed in the TIS. These eight intersections were selected based on conversations with key staff at each of the above agencies and were reviewed and approved by City of The Dalles, Wasco County, and ODOT Region 4. The Greenlight claim that "the criteria for selection is not consistent" is unfounded when one considers the coordination with the reviewing agencies as well as the development agreement, which specifies that "the traffic impact analysis will consider traffic impacts to the Chenoweth Interchange, Webber Street Interchange and U.S. 30 and adjacent local streets." A review of the list and locations of the study intersections shows that they are consistent with the development agreement.

A further indication of agency involvement in the selection of study intersections is the fact that even after the original approval and while the WM3 TIS was under review, ODOT requested that one additional intersection be analyzed. DKS and WM3 agreed to include this additional intersection and did so by preparing a supplemental analysis memorandum.<sup>8</sup>

### **DKS Response to "2010 Build-Out Year of TIS does not match 2011 Build-Out Year of Land Use Application"**

The TIS was prepared and submitted in 2007 when the planned build-out year was 2010. Due to recent economic conditions and other setbacks, the project build-out year has changed. This is a common occurrence for developments, but it is not critical as suggested by Greenlight Engineering because the total mitigation package targets growth through the year 2027. Therefore, if any of the mitigations in the 2027 package are triggered when the project is completed, a mechanism for requiring the WM3 development to construct the necessary mitigation(s) will be in place.

### **DKS Response to "TIS Does Not Provide a 20-Year Analysis"**

The WM3 TIS was prepared, submitted, and approved in 2007; therefore, the 2027 future year analysis that was included was in fact a 20-year analysis and satisfies the development agreement between the City of The Dalles, ODOT, and WM3. It is significant to note that only a 15-year analysis would have been necessary if the agreement would have solely required that the traffic study comply with the Transportation Planning Rule (TPR).

---

<sup>7</sup> *WM3 Development Transportation Issues Report*, DKS Associates, March 2, 2007.

<sup>8</sup> *WM3 Additional Intersection Analysis*, DKS Associates, September 5, 2007

### **DKS Response to "Sight Distance Inadequate at I-84 EB Off-Ramp/River Road"**

Based on a discussion with the ODOT designer, the Chenoweth Interchange was designed and constructed in 1996 assuming a 35 mph design speed.<sup>9</sup> Given the 35 mph design speed, 250 feet of stopping sight distance would be required. Therefore, while the design speeds that are represented by Greenlight may be applicable to River Road north of the interchange area, they are not applicable to the interchange ramp terminals. The operating speeds at the interchange are 35 mph due to the approach grades, the stop control tee-intersection nature of River Road as it terminates at Highway 30 approximately 350 feet west of the interchange. As was stated in the Greenlight memo, approximately 480 feet of stopping sight distance was measured and therefore clearly exceeds the necessary standard for the 35 mph design speed.

### **DKS Response to "Compliance with Ordinance No 06-1269 and TPR"**

Compliance to the Transportation Planning Rule (TPR) will be achieved by conditioning the WM3 development to construct the mitigation measures identified in the WM3 TIS at the time the mitigation is triggered by local conditions.<sup>10</sup> It is significant to note that only a 15-year analysis and corresponding mitigations would have been necessary should Ordinance No 06-1269 have solely required compliance with the Transportation Planning Rule (TPR).

### **DKS Response to "Shopping Center Designation Inappropriate" and "Inappropriate Shopping Center Designation Suggests Lower Traffic Volume than will be generated by the Proposed Development"**

It can and will be argued that the free-standing discount store (ITE Land Use 815) is not an appropriate choice for the proposed development. The description of a similar land use—a free-standing discount *superstore* (ITE Land Use 813)—makes this clear. It states:

"The discount superstores in this category are similar to the free-standing discount stores described in Land Use 815, with the exception that they also contain a full service grocery department under the same roof that shares entrances and exits with the discount store area."<sup>11</sup>

Because the proposed development includes a full service grocery department, the free-standing discount store (ITE Land Use 815) trip generation assumptions presented by Greenlight Engineering are not applicable to the proposed development. Instead, a more appropriate land use choice would be a free-standing discount superstore (ITE Land Use 813). Even so, the shopping center (ITE Land Use 820) trip generation rate of 4.65 trips/KSF presented in the WM3 TIS is much more conservative than a free-standing discount superstore (ITE Land Use 813) which is 3.87 trips/KSF.

According to the *ITE Trip Generation Manual*, a free-standing discount superstore (ITE Land Use 813) has a PM peak hour trip rate of only 3.87 trips per 1,000 square feet.<sup>12</sup> This is approximately 20% lower than what was assumed in the WM3 TIS.

<sup>9</sup> Phone conversation with Robert Tovar (Oregon Department of Transportation), February 18, 2009.

<sup>10</sup> See OAR 660-012-0060, section (2)(c).

<sup>11</sup> *Trip Generation Manual, 7<sup>th</sup> Edition*, Institute of Transportation Engineers, 2003, Land Use Code 813.

<sup>12</sup> I.B.I.D.

Furthermore, counts were performed at four similar Wal-Mart stores throughout Oregon and Washington and it was determined that the trip rate of 4.65 trips/KSF was found to be conservative as compared to the actual WalMart trip data. Figure 1 as shown in the appendix summarizes the trip generation comparison.

#### **DKS Response to "No Analysis of Saturday Peak Hour"**

Based on discussions with ODOT, Wasco County and the City of The Dalles the weekday PM peak hour was selected as the critical peak period within the City of The Dalles since this is the peak of the adjacent roadways and the adjacent uses consist of industrial uses that have little to no weekend trip generation. Therefore, Saturday peak hour analysis was not deemed necessary.

#### **DKS Response to "Violation of City Minimum Tangent Standards" and "Violation of City Minimum Grade Standards"**

These issues will be determined as part of the design review conducted by the City of The Dalles, Wasco County, and ODOT and are not applicable to the current application.

#### **DKS Response to "Lack of Traffic Signal Warrant Analysis"**

The traffic signal needs as identified in the *WM3 Transportation Impact Study* were shown as being needed prior to the 2027 analysis period but were not needed for the short-term 2010 scenario. Traffic signal installation is governed based on traffic volume warrant thresholds as provided in the Manual on Uniform Traffic Control Devices and should be installed when one or more of the warrants are met. The WM3 Development has been conditioned to install the traffic signals as identified in the traffic study when these warrants are met. However, the traffic signal warrants cannot be evaluated at this time since they are based on actual traffic volumes and not theoretical traffic volumes. It should be noted that the WM3 TIS does indicate that "the developer should coordinate with ODOT, Wasco County, and the City of The Dalles to determine how the developer can contribute funds towards future traffic signals as identified." It is understood by all entities involved that future traffic signals can only be installed when indicated by a traffic signal warrant analysis. It is also clearly advantageous to all involved that when the time comes that traffic signal warrants are met, funding will already be available.

#### **DKS Response to "No Crash Data – TIS Lacks Transparency"**

Greenlight Engineering indicates that because the 6<sup>th</sup> Street/Webber Street intersection has a crash rate greater than 1.0 collision per million entering vehicles, a detailed review of collision history at this intersection should be performed. This analysis was in fact performed and is included in the Accident History section of the WM3 TIS. The corresponding paragraph is reproduced below:

"A more detailed evaluation of the W. 6<sup>th</sup> Street/Webber Street collisions was conducted to determine the types and severity of the collisions. The collision data yielded 8 rear-end, 8 turning and 4 angled collisions with 7 of those collisions having injuries. The W. 6<sup>th</sup> Street/Webber Street traffic signal currently has permitted left turn phasing on all approaches with heavy northbound and southbound through traffic. The majority of the collisions (11 of the 20 collisions) could be related to the permitted left turn traffic signal phasing. This

intersection should consider protected or protective/permissive phasing to improve intersection safety."

Safety will in fact be improved by the proposed mitigations identified in the WM3 TIS for the W 6<sup>th</sup> Street/Webber Street intersection. Specifically, the mitigations include the addition of a westbound left-turn lane, which would enable the addition of a protected phase for the left-turn movement, thereby increasing intersection safety.

It is agreed that the detailed crash history is typically provided in a TIS appendix. This oversight will be corrected, and the ODOT crash reports will be provided to the City.

#### **DKS Response to "Reasonable Access Requirement Not Addressed"**

Two accesses are in no way unreasonable for a development as large as the one being proposed. This is especially true given the lack of an adjacent local street network. In fact, it is recommended that all developments, no matter how large, should have at least two accesses to the nearby street network in order to ensure a secondary access is available for emergency purposes. Other clear benefits to having two accesses are that less out-of-direction travel is required, thereby reducing vehicle miles traveled (VMT), and additional capacity is available, thereby reducing congestion.

#### **DKS Response to "Lack of Transparency Regarding TIS Scoping"**

Prior to performing the WM3 TIS, a memorandum documenting the scope and key assumptions of the study was provided by DKS Associates to the City of The Dalles, Wasco County, and ODOT Region 4. The memorandum was reviewed and approved and will gladly be provided to any interested parties.

#### **DKS Response to "Turn Lane Worksheets Not Provided as Referenced"**

It is agreed that no turn lane worksheets were included in the appendix as referenced in the WM3 TIS. This oversight will be corrected and the turn lane worksheets will be provided.

Feel free to give us a call if you have any questions or comments.



## **ODOT TPAU Analysis Procedures Manual Sections 4.1–4.4**

---

## **4 DEVELOPING DESIGN HOUR VOLUMES**

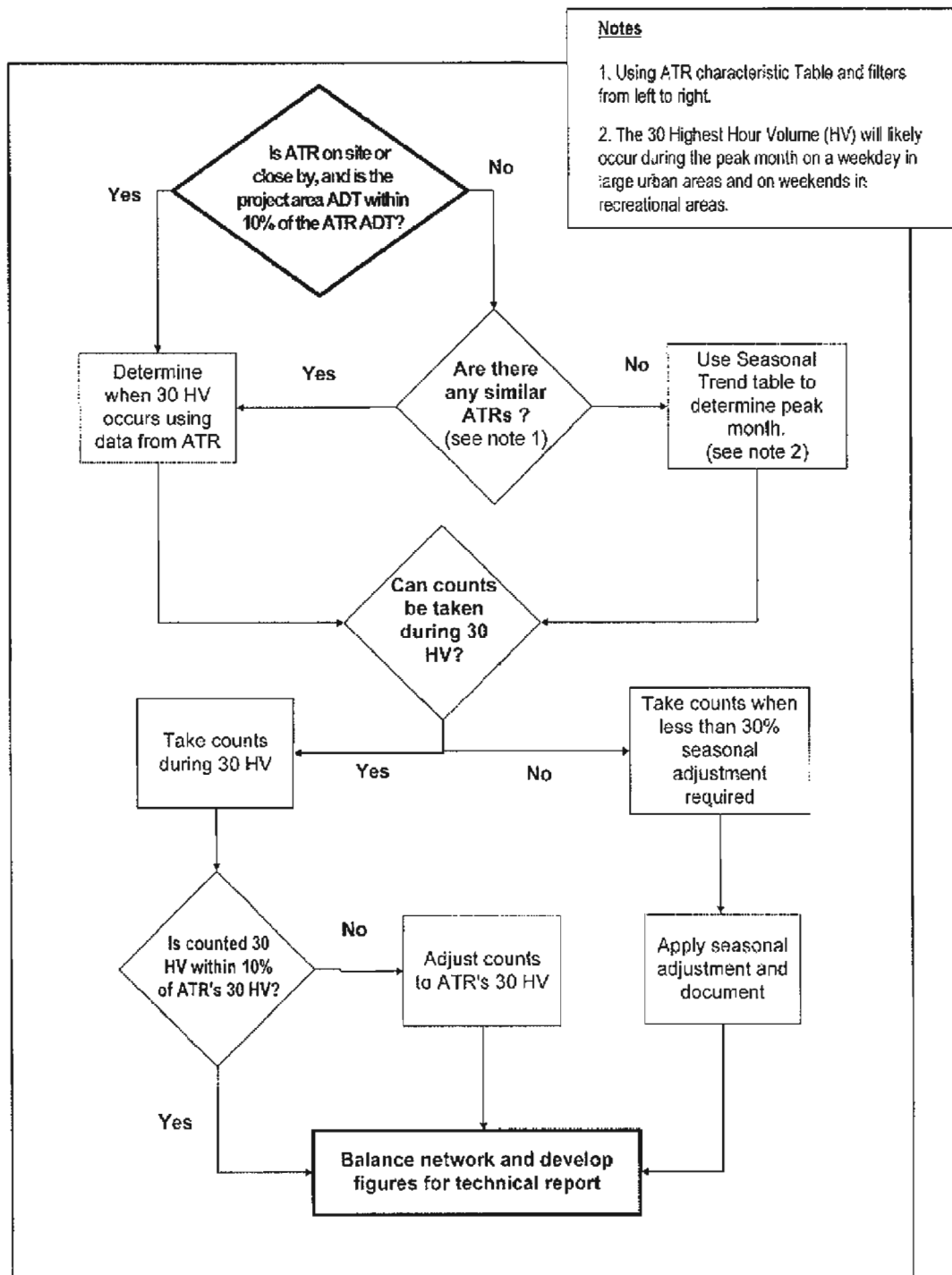
### **4.1 Purpose**

DHVs are used for ODOT planning and project level analyses. The DHV is defined as the future year 30 HV. The following procedure outlines the development of the DHV for a single intersection based on the application of seasonal factors and growth rates to manual counts.

Daily traffic count volumes cannot be used alone for design or operational analysis of transportation projects. This chapter will outline the procedure for developing the DHVs used for ODOT planning and project level analysis. Topics covered include:

- General Considerations
- Peak Hour Selection
- Seasonal Factors
- Volume Development for Sketch Planning
- Forecasting
- Comprehensive Example

**Figure 4-1 Process for Development of 30th Highest Hour Volumes**



## **4.2 General Considerations**

### **4.2.1 Rounding**

The 30 HV or DHV need to be rounded before the network is balanced. The traffic volumes are not that precise to go down to one vehicle, especially beyond the existing year. Balancing the network is easier if the network is not down to the individual vehicle. Round volumes to the nearest five for the existing, build year and any short-term future years. Twenty-year future volumes can either be rounded to the nearest five or ten vehicles. Volumes less than five vehicles should use the "<5" symbol instead of using zero.

### **4.2.2 Need for Balancing**

The 30 HV and the DHV networks need to be balanced. Balancing is simply, "what goes into an intersection or segment needs to come out." Without balancing, it is possible to have two intersections with nothing between them with the volume that leaves one intersection and enters the next one be 200 vph or more different. Interstates and expressways with interchanges and no accesses need to balance perfectly from one intersection or interchange to another. Roadways with accesses probably will not balance perfectly, but should be consistent from intersection to intersection.

The timing of the traffic counts can help determine how easy a network is to balance. Counts that are spread throughout the allowable three-year span taken at different time of the year will be harder to balance than counts all taken on the same day or within a week of each other.

### **4.2.3 Documentation**

It is critical that after every step in the 30 HV and DHV processes that all of the assumptions and factors are carefully documented, preferably on the graphical figures themselves. Seasonal adjustments, ATR 30 HV adjustments, yearly growth factors, 20- year growth factors, ATR's used, peak hour assumed are some of the items that need to be documented. If all is documented then anyone can easily review the work or pick up on it quickly without questioning what the assumptions were. The documentation figures will eventually end up in the final report or in the technical appendix. The volume documentation should include:

- Figure showing raw traffic volumes with hour, month, day and year that the peak hour occurred. Also show the lane configurations and the intersection control type. See Figures 4-15 and 4-16.
- Figure showing raw traffic volumes for the system peak hour. See Figures 4-17 and 4-18. Figure showing unbalanced base year 30 HV. Show any yearly growth factors to adjust counts to base year plus any seasonal factors used. See Figures 4-19 and 4-20.

- Figure showing balanced base year 30 HV. See Figures 4-21 and 4-22.
- Figure showing balanced future year DHV. Note on the figure how future volumes were developed. If historic trends were used, cite the source. If the cumulative method was used, include a land use map, information that documents trip generation and through movement growth. If a model was used, attach the base and future year model runs. See Figures 4-23 and 4-24.

### **4.3 Peak Hour Selection**

Daily traffic volumes, while useful for planning purposes, cannot alone be used for design or operational analysis purposes. Once all of the traffic counts have been obtained, the intersection counts should be adjusted to a single system peak hour. The peak hour is the single hour of the day that has the highest hourly volume. Use of the 15-minute breakdowns in the traffic counts is necessary in order to determine the true peak hour, resulting in a time period such as 4:00 PM to 5:00 PM or, just as easily, 4:45 PM to 5:45 PM. The final selection of a peak hour may be based on a simple majority of counts that have the same peak hour, using a controlling intersection, or the count(s) that the analyst believes are the most accurate. Counts that have longer durations or that are taken close to the 30 HV are generally more accurate. A procedure using TruckSum to determine the system peak hour volumes and other factors when the count peak hour is different from the system peak hour is provided in Chapter 11.

Generally PM peak hour volumes are higher than AM peak hour volumes. In areas where there are large industries with shift changes, the hour during the shift change may be as high as or higher than the PM peak hour for the remainder of the transportation network. If this is true, another set of volumes should be developed. Volumes for the non-standard peak hour should be developed along with the PM peak hour volumes so that all of the volumes may be analyzed at a later date. Multiple sets of volumes may be necessary in these circumstances, which may include areas of heavy industrial, retail, or recreational uses; coastal routes; or on routes with highly directional commuter flows.

The peak hour from a manual count is converted to the 30 HV by applying a seasonal factor. The 30 HV is then used for design and analysis purposes. Experience has shown that the 30 HV in large urban areas usually occurs on a weekday during the peak month of the year. The 30 HV for an urban area typically ranges from 9- to 12-percent of the Average Annual Daily Traffic (AADT). For a recreational route, the 30 HV usually occurs on a summer weekend and ranges from 11- to 25-percent of the AADT.

It is recommended a top 200- to 500-hour count listing of the ATR(s) is obtained from the Transportation Systems Monitoring Unit. The 30 HV at the ATR(s) will be included in the list so that it will be possible to determine when the 30 HV occurs during the day and in the week. Manual counts can then be timed for the period when the 30 HV will likely occur, minimizing seasonal adjustments.

Figure 4-1 is a simplified flow chart of the process for developing 30th highest hour volumes.

#### **4.4 Seasonal Factors**

Since manual counts are taken throughout the year, data derived from a count taken in a particular month may need to be converted to the peak month by applying a seasonal factor. This can be accomplished using data collected from the ODOT ATR stations.

There are 141 ATR stations throughout the State Highway System. Most of these locations have loops in the roadway that count traffic flows for 24 hours a day/365 days a year, and have been in operation for many years. ATR information is available from the ODOT Transportation (Traffic) Volume Tables (TVT) located on the TDD Transportation Data Traffic Counting Program web site, as well as the ATR Characteristic Table and the Seasonal Trend Table located on the Transportation Analysis webpage of the TDD Planning Section website.

ATRs provide the percentage of AADT that occurs in the count month and in the peak month. This information can then be used to develop a seasonal adjustment that may be applied to the manual count using one of the following three methods.

- On-Site ATR Method
- ATR Characteristic Table Method
- ATR Seasonal Trend Table Method

The On-Site ATR Method is the best and most accurate method to use, followed by the ATR Characteristic Table Method and then the ATR Trend Table Method. All of the seasonal adjustment tables and ATR information are updated annually.

Seasonal factors greater than 30% should be avoided. Factors such as these indicate that a count was NOT taken at or close to the time that the 30 HV occurs. Using a winter count with a high seasonal factor to represent the peak summer period will likely not represent traffic turning movements accurately, as driving patterns change in the winter compared to the summer. As an example, suppose a count was taken at a rural intersection in the winter months with one of the minor legs of the intersection serving a campground beyond the intersection. The turning volume in the direction of the campground may be small or non-existent; say 5 vph. Even with a seasonal factor of 50%, this would result in an adjusted volume of only 8 vph, compared to an actual summer 30 HV that may be 20 vph. Simply factoring for the season would still leave the turning movements too low.

##### **4.4.1 On-Site ATR Method**

The On-Site ATR Method is used when there is an ATR within or near the project area. If located outside of the project area, there should be no major intersections between the ATR and the project area, and it should be within a minimal distance so that the traffic characteristics such as road class, number of lanes, rural/urban area, etc., are comparable. It is also important to check that the project area's AADT in the Transportation Volume Table is within +/- 10% of the ATRs AADT.

---

**Example 4-1 Seasonal Factor – On-Site ATR**

---

**On-Site ATR in Project Area**

A traffic count was taken June 15th–18th along Kings Valley Highway No. 191 (OR 223) at MP 28.00.

- **Step 1: Transportation Volume Table** - ATR 02-005, located on Kings Valley Highway at MP 26.40, can be used.
- **Step 2: ATR Trend Summary** - The ATR number corresponds to a table in the last half of the TVT that contains yearly summaries for each ATR. From the column titled “Average Weekday Traffic/Percent of ADT,” the count month and peak month percentage of ADT should be recorded. This information should be obtained from TVT’s for the past five years. The peak month is the month with the highest percentage. The highest and lowest percentages should be eliminated to account for construction activity that may have occurred in the vicinity of the ATRs during the five-year period. An average percent of ADT is then calculated for the remaining three years. The percentages shown in the TVT represent the 15th day of the month, so interpolation is needed if the count was taken near the beginning or end of a month. Account for construction activity that may have occurred in the vicinity of the ATRs during the five-year period. An average percent of ADT is then calculated for the remaining three years. The percentages shown in the TVT represent the 15<sup>th</sup> day of the month, so interpolation is needed if the count was taken near the beginning or end of a month.

**Table 4-1 Seasonal Adjustment Using ATR #02-005**

	2003	2002	2001	2000	1999
Peak Month (July)	112%	113%	121%	114%	115%
Count Month (June)	108%	108%	105%	114%	115%

Note: Shaded values dropped from average calculation.

As shown in Table 4-1, the percentage of ADT values listed during June and July for the past five years are reviewed to calculate the average. The highest and lowest values, shown as shaded, are dropped from this calculation. The average monthly factors are determined as follows:

- The average peak month (July) is:  $(113\% + 114\% + 115\%) / 3 = 114\%$ .
- The average count month (June) is:  $(108\% + 108\% + 114\%) / 3 = 110\%$ .
- The seasonal adjustment is  $\text{July/June} = 114\% / 110\% = 1.04$ .

Therefore, traffic volumes in the month of July are 1.04 times greater than in June. To convert the June traffic data to the 30 HV:



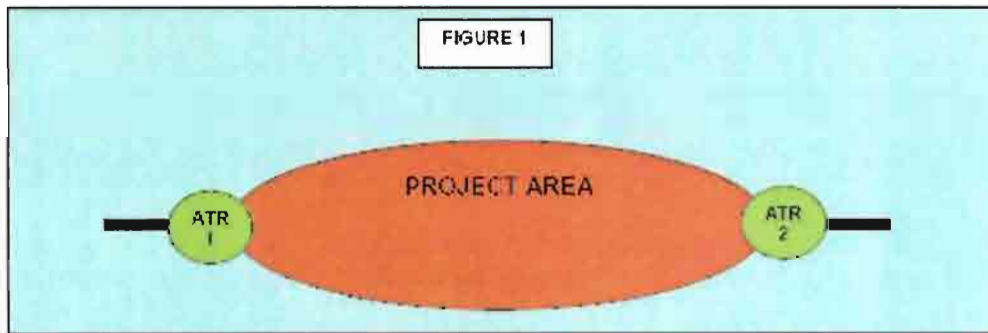
$$30 \text{ HV} = (\text{June PHV}) \times (\text{Peak Month Percent of ADT/Count Month Percent of ADT}).$$

If one of the peak hour turning movement volumes was 75 vph in June, then the 30 HV for July would be  $1.04 \times 75 \text{ vph} = 78 \text{ vph}$ .

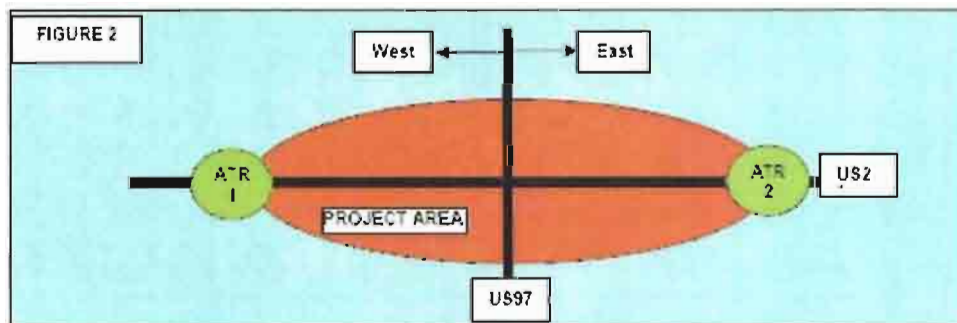
---

Procedure for seasonal adjustment when 2 ATR's are within the project area:

Scenario # 1: See Figure 1. In this scenario, the project area has two ATRs at each end. The project area ADT, roadway characteristics, and roadway functional class are the same as at both ATRs. In order to seasonally factor the peak hour volumes within the project area, an average of the two ATR seasonal factors recommended.

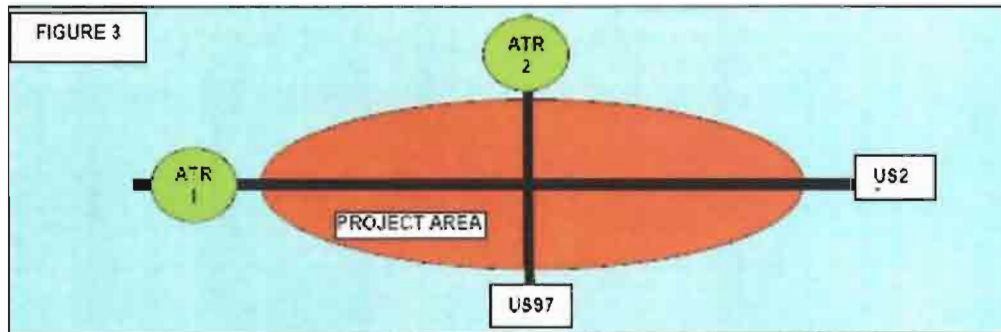


Scenario # 2: Scenario 2 has two ATRs on US20 (See Figure 2) within the project area at each end. The roadways east of US97 have the same ADT and characteristics as ATR 2 while the west side has the same ADT and characteristics as ATR 1. With this scenario, each side of US97 should be seasonally factored using the ATR on that side.



Scenario # 3: In this scenario one ATR is located on US20 and another on US97. If US20

within the project area has the same roadway characteristics as at ATR 1, the seasonal adjustment factor at ATR 1 should be used for US20. The same process should be applied for US97 if US97 has the same roadway characteristics as at ATR 2. Otherwise, an average of the seasonal factors from both ATRs should be applied for the project area. (See Figure 3).



### ATR Characteristic Table Method

The ATR Characteristic Table provides general characteristics for each ATR in Oregon, and should be used when there is not an ATR on-site. The Characteristic Table is a filterable Excel table that will often provide more than one ATR with similar characteristics. See example in Table 4-2.

Averaging multiple ATRs with similar characteristics will yield a more appropriate factor than if only one ATR is used. Follow the steps described in the on-site ATR Method for averaging count and peak months over 5 years for each ATR with similar characteristics. The factor used to convert the traffic data to 30 HVs will be an average of these similar characteristic ATR factors. Seasonal Traffic Trend groupings for the table were constructed by plotting the monthly percent of AADT for each ATR. The plots were then grouped into trends with the greatest influence in traffic patterns.

Table 4-2 ATR Characteristic Table Example

2005 ATR Characteristic Table										
Seasonal Traffic Trend	Area Type	# of Lanes	Weekly Traffic Trend	2005 AADT	OHP Classification	ATR	County	Highway Route, Name, Location	MP	State Highway Number
Summer < 2500	Rural	2	Weekday	760	District Highway	01-001	Baker	US 30, La Grand	33.20	66
Summer < 2500	Rural	2	Weekday	220	District Highway	01-007	Baker	OR 203, Medical	36.86	340
Summer < 2500	Rural	2	Steady	640	District Highway	01-010	Baker	OR 86, Baker	37.55	12

It is important to note that the trends provided in the table are not the only trends attributed to each ATR, but are the dominant trends. After the seasonal traffic trend characteristic is selected, other trend groupings, including area type (e.g., urban, rural), number of lanes and weekly traffic trends are broken down to provide more comparable sub-groupings.

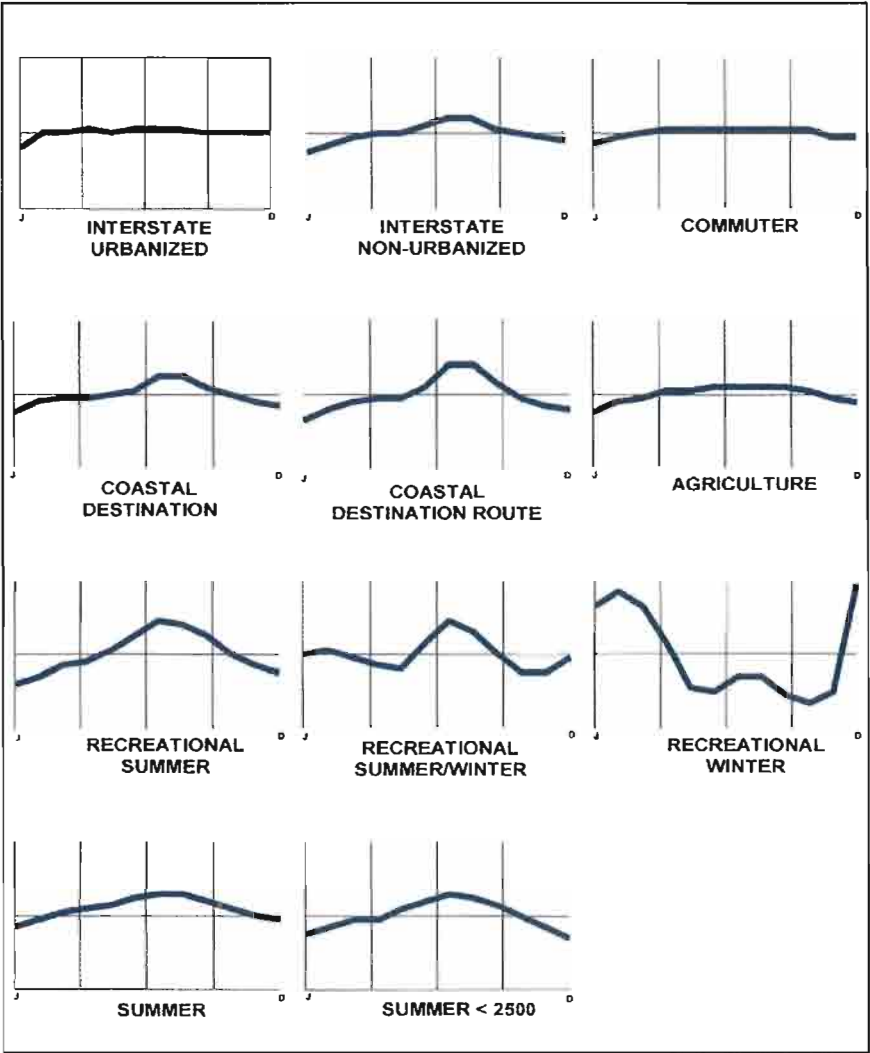
ATRs are characterized by only one of eleven seasonal trends, described below and illustrated in Figure 4-2. Project areas should be characterized by these trends in the order listed below.

1. **Interstate Urbanized:** ATRs located on any section of urbanized (areas of population > 50,000).interstate. (Example: I-5, Iowa Street - ATR #26-016.)
2. **Interstate Non-Urbanized:** ATRs located on any non-urbanized interstate section. (Example: I-84, west of Troutdale - ATR #26-001.)
3. **Commuter:** ATRs characterized by small seasonal changes in traffic patterns and commuting between city pairs. (Example: OR 22, West Salem Bridges - ATR #24-014.)  
Note: Also for non-state streets in urbanized cities.
4. **Coastal Destination:** ATRs characterized by summer peaks to/or within larger coastal city destinations as well as favorable routes from the valley. Favorable routes for Coastal Destinations include: Salmon River Highway (OR 18), Corvallis-Newport Highway (US 20/OR 34), Alsea Highway (OR 34), and Florence-Eugene Highway (OR 126). (Example: OR 18, east of Valley Junction - ATR #27-001.) Note: This grouping does not include the Sunset Highway.
5. **Coastal Destination Route:** ATRs characterized by high summer peaks on predominantly rural routes to/or between large coastal cities and coastal destinations. Rural routes include the Sunset Highway (US 26) from the Wilson River Hwy. junction, Umpqua Highway (OR 38), and Redwood Highway (OR 199). (Example: US 101, south of Rockaway - ATR #29-001.)
6. **Agriculture:** ATRs characterized by peaking in the late summer and fall harvest months. (Example: Kings Valley Highway - ATR #02-005.)
7. **Recreational Summer:** ATRs characterized by high summer peaks in recreational areas. (Example: Crater Lake Highway, south of Fort Klamath - ATR #18-021.)
8. **Recreational Summer/Winter:** ATRs characterized by both summer and winter peaks in recreational areas. (Example: Timberline Highway - ATR #03-008.)
9. **Recreational Winter:** ATRs characterized by high winter peaks in recreational areas. (Example: Century Drive Highway, Mt. Bachelor - ATR #09-011.)

If the project area trend does not fall into Trends 1 through 9, either Trend 10 or 11 should be used.

10. **Summer:** ATRs characterized by a smaller summer increase in traffic patterns when compared to Recreational Summer. (Example: US 26, south of Warm Springs - ATR #16-006.) Note: Also for non-state streets in small cities.
11. **Summer < 2,500 ADT:** ATRs with less than 2,500 ADT characterized by a smaller summer increase in traffic patterns when compared to Recreational Summer. Could be used, for example, for many rural off-system county roads. (Example: OR 31, east of Silver Lake - ATR #19-010.)

Figure 4-2 Seasonal Trends



ATRS are also characterized by weekly traffic trends and ADT.

- **Weekday:** Traffic volume trends greatest on weekdays; typical for commuter trend and urban areas.
- **Weekend:** Traffic volume trends greatest on weekends; typical for recreational trend and coastal destination trend.
- **Steady:** Traffic volume trends that are steady throughout the week without significant peaks on the weekend or weekdays.

ATRS are also characterized by area type and number of lanes.

- **Urbanized:** ATRs within areas of population > 50,000. (Examples: Portland and Salem)  
**Urban Fringe:** ATRs influenced by an urban area, such as an MPO area. (Example: Wilsonville)
- **Small Urban:** ATRs within areas of population between 5,000 and 49,999. (Examples: Albany and Pendleton)
- **Small Urban Fringe:** ATRs influenced by a small urban area. (Examples: US 101 south of Coos Bay and I-5 north of Albany)
- **Rural:** ATRs on routes outside of areas with population <5,000.
- **Rural Populated:** ATRs in cities with a population of less than 5,000. This also includes unincorporated communities. (Examples: Sisters and Tillamook)

To use the table, filter through the column characteristics from left to right to create a list of ATRs with similar characteristics. Starting with the “Seasonal Traffic Trend” column, filter out the traffic trend that best describes the project area. Next, filter the area type, number of lanes, and weekly traffic trend. Make sure that the section of highway where the ATR(s) is located and the project area for which the seasonal adjustments are being made have similar traffic characteristics. To be considered comparable, the AADT of the characteristic ATR should be within +/- 10% of the Transportation Volume Table AADT for the project area.

---

#### **Example 4-2 Seasonal Factor – ATR Characteristics Table**

---

##### **ATR Characteristic Table Method for a Project Area**

A count was taken June 15th–18th along Corvallis-Lebanon Highway No. 210 (OR 34), west of I-5 at MP 5.35. The Transportation Volume Table AADT is 28,100.

- **Step 1: Transportation Volume Table:** There are no ATRs on this section of the highway.
- **Step 2: ATR Characteristic Table:** This section of highway can be categorized as Commuter/Urban Fringe/Five-Lanes. Filtering through the ATR Characteristic Table from left to right, two ATRs have similar characteristics to the project area. However,

ATR 26-003 has an AADT of 39,100 and is an expressway. As previously noted, characteristic AADT counts should be within +/- 10% of the Transportation Volume Table AADT in order to be considered comparable to the project area. Alternatively, ATR 27-006 is not an expressway and has an AADT of 26,900, which is within 10% of the TVT AADT. The characteristics of these two representative locations are summarized in Table 4-3.

**Table 4-3 Example ATR Characteristic Table (Year 2003)**

Characteristics	ATR Location 1	ATR Location 2
Seasonal Traffic Trend	Commuter	Commuter
Area Type	Urban Fringe	Urban Fringe
Number of Lanes	5	5
Weekly Traffic Trend	Weekday	Weekday
2003 ADT	39,100	26,900
OHP Classification	Statewide Hwy (Expressway)	Statewide Hwy
ATR	26-003	27-006
County	Multnomah	Polk
Highway Route, Name and Location	OR 26, Mt. Hood Hwy, E of Gresham	OR 22, Willamina-Salem Hwy Oak Knoll
ATR Milepoint	14.36	19.4
State Hwy Number	26	30

- **Step 3: ATR Trend Summary:** Data from ATR #27-006 is located in the ATR summary in the back of the TVT and under the "ATR Trend Summaries" on ODOT's Traffic Counter Program website TDD Transportation Data Traffic Counting Program. The count was taken on June 15th, which is in the middle of the month, so the ATR percentages from the TVT can be used directly without interpolation. The peak month was found to be August for two of the three years. Because ATR #27-006 is relatively new, the percentages were averaged over the existing three years (not the normal five year historical data)<sup>2</sup>, as shown in Table 4-4.

**Table 4-4 Seasonal Adjustment Using ATR #27-006**

	2003	2002	2001
Peak Month (August)	110%	110%	110%
Count Month (June)	107%	106%	106%

- The average peak month (August) is:  $(110\% + 110\% + 110\%) / 3 = 110\%$ .
- The average count month (June) is:  $(107\% + 106\% + 106\%) / 3 = 106\%$ .
- The seasonal adjustment is  $\text{August/June} = 110\% / 106\% = 1.04$ .

Therefore, traffic volumes in the month of August are 1.04 times greater than in June. To convert

the June traffic data to the 30 11V:  $30\ 11V = (\text{June P11V}) \times (\text{Peak Month Percent of ADT/Count Month Percent of ADT})$ .

If one of the peak hour turning movement volumes were 100 vph in June, then the 30 11V for August would be  $1.04 \times 100 \text{ vph} = 104 \text{ vph}$ .

#### 4.4.2 Seasonal Trend Method

The seasonal trend table is used when there is not an ATR nearby or in a representative area. The Seasonal Trend Table was constructed by averaging seasonal trend groupings from the ATR Characteristic Table. Essentially, by using a factor from the table, the average for the entire trend grouping is applied to the project area as shown in Table 4-5.

**Table 4-5 Example ATR Seasonal Trend Table (Year 2003)**

	Jan 1	Jan 15	Feb 1	Feb 15	Dec 15	Peak Period Seasonal Factor
Recreation Summer/Winter	1.2349	1.2922	1.4023	1.5123	1.1776	0.8582
Recreation Winter	0.9119	1.0561	1.0292	1.0023	0.7676	0.7676

To determine the appropriate seasonal trend, select from the list the trend that best describes the project area. Trends should be characterized in the same order as previously described in the ATR Characteristic Table Method. The Seasonal Factor Table is updated yearly. It is not necessary to average 5 years worth of seasonal factors for this method, or compare AADTs because, as previously stated, this method uses an average of all ATRs in the characteristic trend. In certain areas, averaging seasonal trends may yield a more appropriate factor than just a single trend. These areas include:

- **Coastal Destination and Coastal Destination Route Trends:** It may be necessary to average trends in areas such as Warrenton, Depoe Bay and Yachats. While these cities are destinations along the Oregon Coast, they do not have the summer influx of traffic associated with larger coastal destinations such as Lincoln City and Seaside. A Coastal Destination Trend Factor for these areas may be too high, while a Coastal Destination Route Trend Factor may be too low. When analyzing coastal cities such as these, it is appropriate to average the trends to yield a more reasonable factor.
- **Summer and Commuter Trends:** It may be necessary to average trends when analyzing mid-sized cities such as Philomath, Dallas and Sutherlin. For urbanized areas the commuter trend is appropriate, while for smaller areas the summer trend is appropriate. However, for mid-sized areas such as these, the summer or commuter trends may alone be too high or too low. A more reasonable factor would be obtained by averaging the



summer and commuter trends.

- **Interstate and Interstate Urbanized Trends:** It may be necessary to average trends when analyzing interstates in small urban and fringe areas (urban and small urban) such as Albany, Wilsonville and north of Roseburg. For rural areas the interstate trend is appropriate, while for urbanized areas the interstate urbanized trend is appropriate. For small urban and fringe areas such as these, however, these trends may alone be too high or too low. A more reasonable factor would be obtained by averaging the interstate and interstate urbanized trends.

It is important to note that these are the only trend grouping pairs that would be appropriate to average, with the exception of interchange ramps, which should use an average of the mainline and cross road seasonal adjustments. Interstate should only be averaged with interstate urbanized, and should never be averaged with Coastal or Recreational. The same is true for the other trends not listed in the above examples. The Seasonal Trend Table is located on the Transportation Analysis webpage of the TDD Planning website.

Factoring count data to the peak month requires dividing the seasonal factor for the count period by the seasonal factor for the peak period. The peak period seasonal factor for a traffic trend is the lowest value in the row, and is highlighted in the last column in the table.

Seasonal factors are given for the 1st and the 15th of each month so if the count date is not at the beginning/end or in the middle of a month interpolation is needed.

---

#### **Example 4-3 Seasonal Factor – Seasonal Trend Table**

---

##### Seasonal Trend Method for a Project Area

A count of 11,000 was taken July 1st – 5th along Oregon Coast Highway No. 9 (US 101) at MP 63.19 (north of Tillamook).

- **Step 1: Transportation Volume Table:** There are no ATRs on this section of the highway.
- **Step 2: ATR Characteristic Table:** This section of highway can be categorized as Coastal Destination/Populated Rural/Two-Lanes. Filtering through the ATR Characteristic Table, from left to right, two ATRs have similar characteristics to the project area. However, none of the characteristic ADT values are within +/- 10% of the Transportation Volume Table ADT for the project area. Refer to Table 4-6 for details regarding these two candidate locations.

**Table 4-6 Example ATR Characteristic Table (Year 2003)**

Characteristics	ATR Location 1	ATR Location 2
Seasonal Traffic Trend	Coastal Destination	Coastal Destination
Area Type	Pop Rural	Pop Rural
Number of Lanes	2	2
Weekly Traffic Trend	Weekday	Weekend
2003 ADT	6600	19500
OHP Classification	Statewide Hwy-Scenic Byway	Statewide Hwy (Expressway)
ATR	26-003	27-006
County	Multnomah	Polk
Highway Route, Name and Location	US 101, Oregon Coast Hwy, S of Bandon	OR 18, Salmon River Hwy, E of Valley Junction
ATR MP	275.87	23.76
State Hwy Number	9	39

- **Step 3: Seasonal Trend Table:** Since there are no ATRs with similar characteristics, the Seasonal Trend Table must be used. The correct values are obtained by following the “Coastal Destination” row to the “Jul\_1” count month column, and to the “Peak Period Seasonal Factor” column at the end of the table, as summarized in Table 4-7.

**Table 4-7 Seasonal Trend Table (Year 2003)**

	Jun 15	Jul 1	Jul 15	Aug 1	Peak Period Seasonal
Coastal Destination	0.9948	0.9546	0.8940	0.8334	0.8334

- The peak period seasonal factor is 0.8334.
- The count date seasonal factor (July 1st) is 0.9546.
- The seasonal adjustment is: Count Date Seasonal Factor/Peak Period Seasonal Factor =  $.9546 / .8334 = 1.15$ .

Therefore, the peak period volumes for a Coastal Destination are 1.15 times greater than volumes for the 1st – 5th of July.

To convert the July traffic data to the 30 HV:

$$30 \text{ HV} = (\text{July PHV}) \times (\text{Count Date Seasonal Factor} / \text{Peak Period Seasonal Factor}).$$

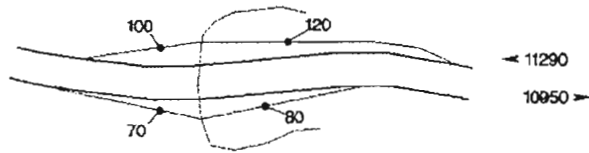
If one of the peak hour turning movement volumes were 100 vph in July, then the 30 HV would be  $1.15 \times 100 \text{ vph} = 115 \text{ vph}$ .

## **Rowena ATR Information**

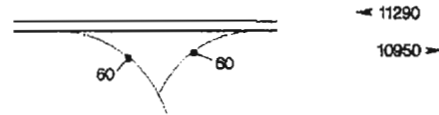
---

# INTERSTATE INTERCHANGES AND REST AREAS

Viento State Park – Exit 56



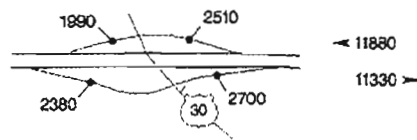
Mitchell Point Overlook – Exit 58



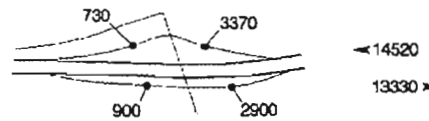
Service Road



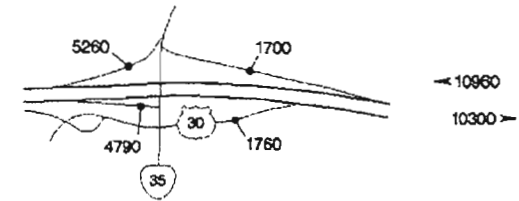
West Hood River – Exit 62



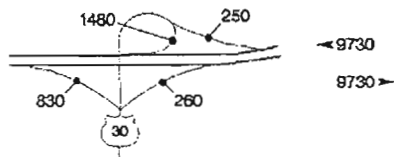
2nd Street – Exit 63



East Hood River – Exit 64



Mosier – Exit 69



Memaloose Rest Area – Exit 72, 73



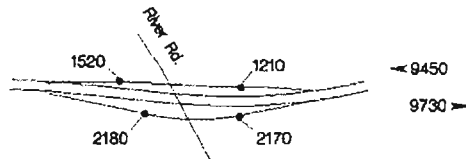
33-001  
Rowena ATR  
MP 75.93  
← 9730  
9730 →

Rowena – Exit 76

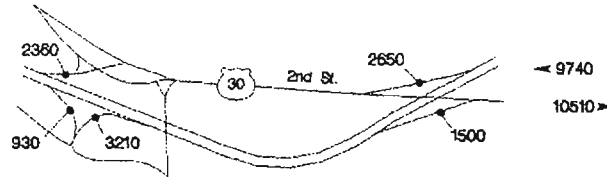


# INTERSTATE INTERCHANGES AND REST AREAS

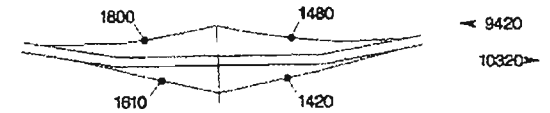
Chenoweth - Exit 82



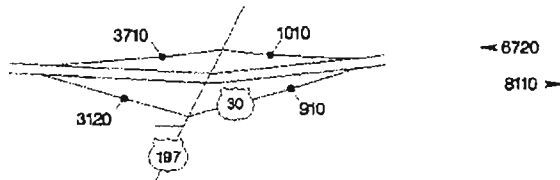
West The Dalles - Exit 83



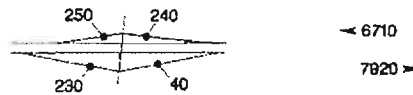
Brewery Grade - Exit 85



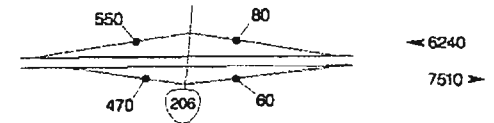
The Dalles Bridge - Exit 87



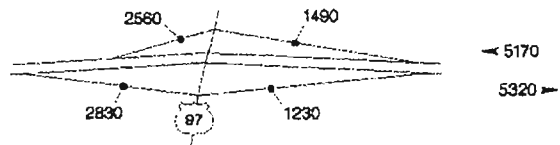
The Dalles Dam - Exit 88



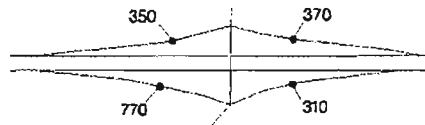
Celilo-Wasco Hwy. - Exit 97



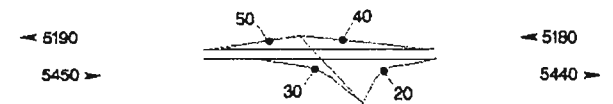
Biggs Jct. - Exit 104



Rufus - Exit 109



West John Day - Exit 114

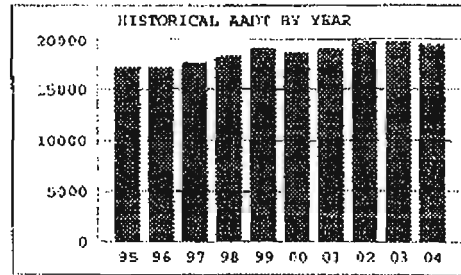


Location: I-84 MP 75.91, COLUMBIA RIVER HIGHWAY, NO. 2  
6.3 miles west of The Dalles

Recorder: ROWENA, 33 001  
Installed: January, 1938

#### HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1995	17167	167	16.7	13.2	12.3	12.0
1996	17099	173	16.4	14.5	13.1	12.9
1997	17689	170	16.4	14.0	12.6	11.9
1998	18311	163	16.5	14.1	12.9	12.3
1999	19108	170	16.0	13.8	12.9	12.4
2000	18688	170	15.3	13.7	12.6	12.2
2001	19084	168	16.8	13.9	12.9	12.5
2002	19726	166	15.8	14.5	12.8	12.3
2003	19728	167	16.1	14.9	13.1	12.5
2004	19455	***	****	****	****	****



#### 2004 TRAFFIC DATA

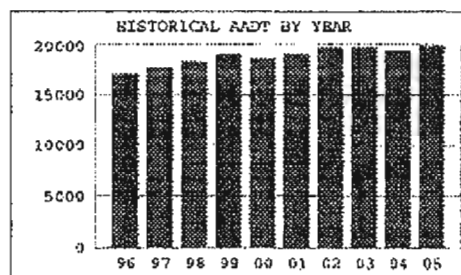
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown	Percent of ADT
January	11493	59	11787	61	Passenger Cars	37.5
February	15676	81	16028	82	Other 2 axle 4 tire vehicles	35.9
March	17465	90	18700	96	Single Unit 2 axle 6 tire	3.4
April	18284	94	19237	99	Single Unit 3 axle	0.7
May	18873	97	19860	102	Single Unit 4 axle or more	0.0
June	20769	107	22134	114	Single Trailer Truck 3 axle or less	3.4
July	22803	117	24606	123	Single Trailer Truck 5 axle	13.5
August	21830	112	23700	122	Single Trailer Truck 6 axle or more	4.7
September	20560	105	21700	112	Dbl-Trailer Truck 5 axle or less	0.2
October	18931	97	20113	103	Dbl-Trailer Truck 6 axle	0.5
November	18660	96	19100	98	Dbl-Trailer Truck 7 axle or more	2.0
December	16400	84	17100	88	Triple Trailer Trucks	0.6
					Buses	0.2
					Motorcycles & Scooters	3.3

Location: 1-84 MP 75.93, COLUMBIA RIVER HIGHWAY, NO. 2  
6.3 miles west of The Dalles

Recorder: ROWENA, 33-001  
Installed: January, 1978

# HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1996	17099	173	16.4	14.6	13.1	12.9
1997	17689	170	16.4	14.0	12.6	11.9
1998	18311	162	16.5	14.1	12.9	12.3
1999	19108	170	16.0	13.8	12.9	12.4
2000	18688	170	15.3	13.7	12.6	12.2
2001	19084	169	16.8	13.9	12.9	12.5
2002	19726	166	15.8	14.5	12.8	12.3
2003	19728	167	16.1	14.6	13.1	12.5
2004	19455	165	14.7	13.1	12.4	12.1
2005	19879	170	14.8	13.8	12.6	12.2



# 2005 TRAFFIC DATA

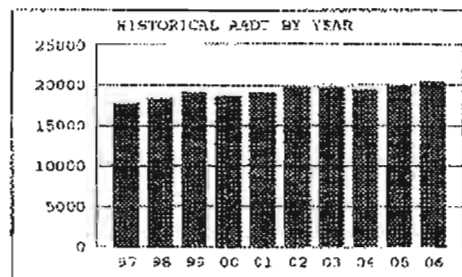
	Average		Percent		Percent	
	Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown	Percent of ADT
January	14800	74	15000	75	Passenger Cars	38.5
February	15800	79	16200	81	Other 2 axle 4 tire vehicles	34.5
March	17600	89	18800	95	Single Unit 2 axle 6 tire	3.1
April	18112	91	18872	95	Single Unit 3 axle	0.8
May	19611	99	20542	103	Single Unit 4 axle or more	0.1
June	21654	109	22851	115	Single Trailer Truck 4 axle or less	0.7
July	23202	117	24731	124	Single Trailer Truck 5 axle	13.6
August	22880	115	24536	123	Single Trailer Truck 6 axle or more	5.4
September	20131	101	21190	107	Dbl-Trailer Truck 5 axle or less	0.3
October	18675	94	19647	99	Dbl-Trailer Truck 6 axle	0.4
November	19120	96	19922	100	Dbl-Trailer Truck 7 axle or more	1.7
December	16638	84	16259	82	Triple Trailer Trucks	0.2
					Buses	0.3
					Motorcycles & Scooters	0.2

Location: I-84 NB 75.93, COLUMBIA RIVER HIGHWAY NO. 2  
0.71 mile west of Rowena Interchange

Recorder: ROWENA, 33-001  
Installed: January, 1998

#### HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1997	17689	170	16.4	14.0	12.6	11.9
1998	18311	163	16.5	14.1	12.9	12.3
1999	19109	170	16.0	13.9	12.9	12.4
2000	18680	170	15.3	13.7	12.6	12.2
2001	19084	168	16.0	13.9	12.9	12.5
2002	19726	166	15.8	14.5	12.8	12.3
2003	19720	167	16.1	14.0	13.1	12.5
2004	19455	165	14.7	13.1	12.4	12.1
2005	19879	170	14.6	13.8	12.6	12.2
2006	20510	169	15.3	13.3	12.3	11.9



#### 2006 TRAFFIC DATA

	Average	Percent	Average	Percent	Classification Breakdown	Percent
	Weekday	of	Daily	of		of ADT
	Traffic	ADT	Traffic	ADT		
January	16121	79	15938	78	Passenger Cars...	39.7
February	17140	84	17116	83	Other 2 axle 4 tire vehicles...	34.5
March	18771	91	19273	94	Single Unit 2 axle 5 tires...	3.1
April	19469	95	20399	99	Single Unit 3 axle...	3.9
May	20329	98	20912	102	Single Unit 4 axle or more...	3.1
June	21853	107	22808	111	Single Trailer Truck 4 axle or less...	3.7
July	22373	114	24561	120	Single Trailer Truck 5 axle...	13.6
August	23314	114	24684	120	Single Trailer Truck 6 axle or more...	5.4
September	21254	104	22442	109	Dbt-Trailer Truck 5 axle or less...	3.3
October	19637	96	20780	101	Dbt-Trailer Truck 6 axle...	5.4
November	19765	91	19772	96	Dbt-Trailer Truck 7 axle or more...	1.7
December	17662	86	17426	85	Triple Trailer Trucks...	0.2
					Buses...	5.3
					Motorcycles & Scooters...	0.2

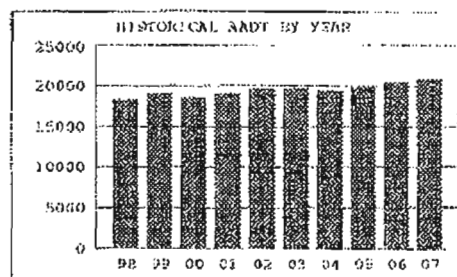


Location: 1.84 MP 75.93, COLUMBIA RIVER HIGHWAY, NO. 2  
0.72 mile west of Rowena Interchange

Recorder: R2885A, 32 091  
Installed: January, 1998

#### HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT					
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour	
1998	19311	163	16.5	14.1	12.9	12.3	
1999	19108	170	16.0	13.9	12.9	12.4	
2000	18688	170	15.3	13.7	12.6	12.2	
2001	19084	168	16.0	13.9	12.6	12.5	
2002	19726	166	15.8	14.5	12.0	12.3	
2003	19728	167	16.1	14.0	13.1	12.5	
2004	19455	165	14.7	13.1	12.4	12.1	
2005	19879	170	14.8	13.8	12.6	12.2	
2006	20518	160	15.3	13.3	12.3	11.9	
2007	20867	163	15.3	13.3	12.3	12.6	



#### 2007 TRAFFIC DATA

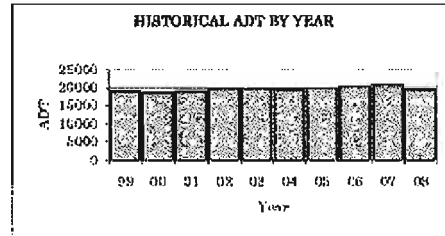
	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT	Classification Breakdown	
					Percent of ADT	
January	15267	73	15388	73	Passenger Cars	94.5
February	17378	83	17311	82	Other 2 axle 4 tire vehicles	24.5
March	16959	81	19677	94	Single Unit 2 axle 6 tire	3.1
April	19784	95	20605	99	Single Unit 3 axle	0.8
May	20591	98	21439	103	Single Unit 4 axle or more	0.1
June	22059	106	23200	111	Single Trailer Truck 4 axle or less	0.7
July	23611	113	25111	120	Single Trailer Truck 5 axle	13.7
August	23964	115	25698	123	Single Trailer Truck 6 axle or more	5.4
September	22072	106	22956	110	dbl Trailer Truck 5 axle or less	0.3
October	26090	96	21190	102	dbl Trailer Truck 6 axle	0.4
November	19360	93	19939	96	dbl Trailer Truck 7 axle or more	1.3
December	18177	87	18174	87	Triple Trailer Trucks...	0.2
					Mixed...	0.3
					Motorcycles & Scooters	5.2

Location: I-84; MP 75.93; COLUMBIA RIVER HIGHWAY NO. 2; 0.72 mile west of the Rowena Interchange

Site Name: Rowena (33-001)  
Installed: January, 1938

#### HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of AADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1999	19108	170	16.0	13.8	12.9	12.4
2000	18688	170	15.3	13.7	12.6	12.2
2001	19084	168	16.3	13.9	12.9	12.5
2002	19726	166	15.8	14.5	12.8	12.3
2003	19728	167	16.1	14.0	13.1	12.5
2004	19455	165	14.7	13.1	12.4	12.1
2005	19839	170	14.8	13.5	12.6	12.2
2006	20518	169	15.3	13.3	12.3	11.9
2007	20867	163	15.3	13.3	12.3	12.0
2008	19453	164	15.8	13.4	12.4	12.0



#### 2008 TRAFFIC DATA

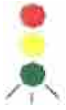
	Average Weekday Traffic	Percent of AADT	Average Daily Traffic	Percent of AADT	Classification Breakdown	Percent of AADT
January	15504	80	14968	77	Motorcycles	0.2
February	17216	89	17245	89	Passenger cars	54.7
March	18855	97	19501	100	Light Trucks	15.5
April	18699	96	19684	100	Buses	0.4
May	19989	103	20479	105	Single unit trucks (2 axles)	2.7
June	20560	106	21378	110	Single unit trucks (3 axles)	0.8
July	22029	113	23310	120	Single unit trucks (4 or more axles)	0.1
August	22295	115	23684	122	Single trailer trucks (4 or less axles)	1.6
September	20225	104	20834	107	Single trailer trucks (5 axles)	17.6
October	19238	99	19819	102	Single trailer trucks (6 or more axles)	3.4
November	18911	97	19209	99	Multi trailer trucks (5 or less axles)	0.1
December	13998	72	13481	69	Multi trailer trucks (6 axles)	0.2
					Multi trailer trucks (7 or more axles)	2.7

**Greenlight Engineering Letter –  
Applicable Pages of February 6, 2009  
Letter and Appendix**

---

This Appendix section includes pages from the Greenlight Engineering letter to The City of The Dalles (Attn: Richard Gassman) dated February 6, 2009.

It only includes pages 1, 3, 4, 5, and the first page of Appendix A.



# GREENLIGHT ENGINEERING

TRAFFIC ENGINEERING/TRANSPORTATION PLANNING

February 6, 2009

City of the Dalles  
Attn: Richard Gassman  
313 Court Street  
The Dalles, OR 97058

**RE:        Site Plan Review 379-08 Pacland – Wal-Mart  
             Subdivision 62-08 Chenoweth Station Subdivision**

## **Introduction**

Greenlight Engineering has been retained by Ken Helm to conduct a review of the transportation related impacts of the proposed Wal-Mart to be located in The Dalles, Oregon.

We have completed an independent review of the September 2007 traffic impact study (TIS) and other related memorandums, reports and site plans available in the written record of the land use application as referenced herein. We have visited the site to collect field measurements, and we have conducted extensive research on the approval criteria for the project.

Based upon the materials available, it is clear that there is insufficient evidence for this project to be approved based upon roadway adequacy and safety issues. There is substantial evidence within the materials currently in the record as well as evidence that we provide herein that should result in a finding that the land use application is inadequate based on traffic safety and capacity issues. There are several errors and omissions of the TIS and land use application that clearly do not meet the requirements to approve the project and do not allow a reviewer to reach a conclusion that the approval criteria of this project are met.

## **Executive Summary**

- The analysis leaves very little room for error with two intersections, I-84 EB offramp/River Road and I-84 EB offramp/6<sup>th</sup> Street both very close to ODOT's mobility standard in 2010. Multiple errors and omissions contained within the TIS will exacerbate the planned operations of these intersections and very likely require their mitigation.
- The trip generation of the TIS contains an obvious and indisputable mathematical error and invalidates the results of the study. The error downplays the impact of the development on all of the study intersections.
- The TIS is not based on the 30<sup>th</sup> highest hour, as purported and required, but instead is based upon the 1171<sup>st</sup> and 1223<sup>rd</sup> highest hour of the year, a clear violation of ODOT analysis procedures. This error is carried through the analysis and vastly understates the traffic volume in the area of the development.

The TIS is based upon the Shopping Center trip generation characteristics of the ITE *Trip Generation* manual. Footnote 24 on page 12 of the TIS correctly reports the equation used in determining the weekday PM peak hour trip generation of a shopping center as follows:

$$\text{Ln T (Trips)} = 0.66 * \text{Ln (SQFT)} + 3.40$$

**However, an error was made in this calculation in the TIS. The TIS reports that the development will generate 1116 trips in the weekday PM peak hour, however, based upon the equation quoted in the TIS, the development will actually generate 1176 trips in the weekday PM peak hour. Calculating this fairly simple equation would lead anyone to this conclusion.**

The trip generation rate of 4.29 trips per 1000 square feet is backcalculated from the number of trips found in the equation and is also incorrect. The actual trip generation rate is 4.52 trips per 1000 square feet. These errors are fairly obvious, critical to the TIS, cannot be disputed and must be corrected.

### **30<sup>th</sup> Highest Hour Not Evaluated as Required**

Although purporting a 30<sup>th</sup> highest hour analysis, as required by ODOT's *Analysis Procedures Manual (APM)*<sup>3</sup>, the TIS is actually based upon an hour staggeringly and exceedingly far from the 30<sup>th</sup> highest hour, which invalidates the results of the traffic study.

The applicant's traffic engineer conducted their turning movement counts on Tuesday July 10, 2007. Based upon their review of traffic data collected from the Automatic Traffic Recorder (ATR) located on I-84 at Rowena, they determined that a weekday evening traffic count on the 2<sup>nd</sup> Tuesday in July would result in portraying the 30<sup>th</sup> highest hour as required by ODOT's *APM* and as referenced in the TIS<sup>4</sup>. In fact, the hours chosen to count represent a very poor choice in attempting to count anywhere near the 30<sup>th</sup> highest hour.

The TIS states that the Rowena location "should be a good representation of what traffic patterns are within the study area since I-84 is adjacent to the proposed site". The TIS makes the case, and we concur, that the Rowena ATR provides adequate information to determine the 30<sup>th</sup> highest hour and is the best information that is available to determine the count period in which to conduct turning movement counts.

The TIS also states that "[t]his count date is consistent with ODOT guidelines since they represent traffic volumes within the peak month" and refers to OAR 734-051. While we concur that the count month is appropriate, we do not concur that the count period is consistent with ODOT guidelines just because it is within the appropriate month.

---

<sup>3</sup> ODOT TPAU, Analysis Procedures Manual, Developing Design Hour Volumes, June 6, 2005 found at [http://www.oregon.gov/ODOT/TD/TPAU/docs/A\\_APM/ch4.pdf](http://www.oregon.gov/ODOT/TD/TPAU/docs/A_APM/ch4.pdf) and as referenced on page 1 of the TIS

<sup>4</sup> Page 6 of the TIS

The code section that is referenced in the TIS does not remotely state that this is true. Certainly, any random set of hours within the month would not be expected to result in traffic near the 30<sup>th</sup> highest hour as counts vary day to day and hour by hour.

Upon review of the 2007 ATR data<sup>5</sup>, the hours of 4 PM - 5 PM and 5 PM - 6 PM (the count hours used in the analysis of the TIS) on July 10, 2007 were the 1171<sup>st</sup> and 1223<sup>rd</sup> highest hours with volumes quite noticeably less than that of the actual 30<sup>th</sup> highest hour. The 1171<sup>st</sup> and 1223<sup>rd</sup> hours had combined hourly flows on I-84 of 1573 vehicles and 1559 vehicles, respectively. The 30<sup>th</sup> highest hour, which occurred on Sunday, July 29, 2007, had a combined hourly flow of 2513 vehicles. Obviously, the difference between the flows of the 30<sup>th</sup>, 1171<sup>st</sup>, 1223<sup>rd</sup> highest hours are quite staggering and have immense ramifications upon the results of the TIS. The lack of congruence between the required analysis and submitted analysis completely invalidate the results of the TIS.

While it is understandable that attempting to predict the 30<sup>th</sup> highest hour when conducting turning movement counts can be a challenge and takes some research, the applicant's traffic engineer picked a count period that is simply not justifiable. Based upon historical data preceding 2007, it would not be expected that the count data chosen would even remotely relate to the 30<sup>th</sup> highest hour.

First, the vast majority of the highest peak hours during each year occur on weekends. This is typical on I-84 as well as most other recreational routes as noted in Figure 4-1 and in several other locations within the *APM*. Peak hours do not occur in this area during the weekday PM peak hours as they do within large urban areas. ODOT methodology recognizes this fact and requires analysis to be based upon the careful research and planning to count near the 30<sup>th</sup> highest hour. Coincidentally, the peak hour of the proposed development will also occur on weekends and not during the weekday PM peak hour, as is discussed later.

Second, the choice of Tuesday as a count day is not an appropriate choice when estimating the 30<sup>th</sup> highest hour. The highest peak hour occurring on a Tuesday throughout the year was on July 3<sup>rd</sup>. This Tuesday contained only the 298<sup>th</sup> highest hour of the year, still nowhere near the 30<sup>th</sup> highest hour.

It could be argued that it is difficult to determine the 30<sup>th</sup> highest hour for counts to be taken 2007 without having 2007 data at hand. Instead, those determining the 30<sup>th</sup> highest hour must rely upon the previous years' ATR data. In the review of the 2006 ATR data<sup>6</sup>, it is clear that the similar patterns that occurred in 2007 also occurred in 2006. In reviewing this data, it is quite clear that the date chosen for turning movement counts was not appropriate and would not yield results that even closely resemble the actual 30<sup>th</sup> highest hour.

Based upon the 2006 data, the 30<sup>th</sup> highest hour occurred on Saturday, November 25<sup>th</sup>. The highest hour of the 2<sup>nd</sup> Tuesday in July 2006 was only the 853<sup>rd</sup> highest hour of that

---

<sup>5</sup> See Appendix A of this report

<sup>6</sup> See Appendix B of this report

year<sup>7</sup>. If the 2006 data would have been consulted, it would have been determined that the count date of July 10, 2007 would not yield the required results of ODOT's *APM*.

**It should be noted that the TIS is based upon counts of I-84 when the hourly volume is roughly 60% of the actual 30<sup>th</sup> highest hour volume, or 40% less than the actual 30<sup>th</sup> highest hour. This, by far, stretches well beyond the 10% threshold required by ODOT's *Analysis Procedures Manual* Figure 4-1 shown below, which at minimum, would require the turning movement counts to be adjusted to the 30<sup>th</sup> highest hour. The use of unadjusted raw traffic counts, as was done in the TIS, is completely inappropriate and do not follow the procedures of the *APM* as purported.**

The reason the selection of the 1171<sup>st</sup> and 1223<sup>rd</sup> highest hours being passed off as the 30<sup>th</sup> highest hour is critical for one key reason. The traffic flows within the area are lower during the 1171<sup>st</sup> and 1223<sup>rd</sup> highest hour than they are in the 30<sup>th</sup> highest hour. The TIS, based upon an analysis far from the 30<sup>th</sup> highest hour, indicates that the I-84 EB offramp/River Road intersection will operate at a v/c ratio of 0.72, just 0.03 under ODOT's 0.75 v/c mobility standard. It is highly likely, if not a foregone conclusion, that this intersection will operate beyond the required v/c ratio of 0.75 if the TIS was based upon the required analysis procedures.

Because of this error, the results that indicate the need for mitigation based upon the City's level of service and ODOT's v/c do not match the required analysis parameters. Not only do they not match the required parameters, but they do not even remotely match them. For this reason alone, the application cannot be approved because the traffic study's traffic counts so far underestimate the volume of traffic that will be present during the actual 30<sup>th</sup> highest hour that the TIS is vastly flawed and unreliable.

---

<sup>7</sup> July 10, 2007 was the 2<sup>nd</sup> Tuesday in July



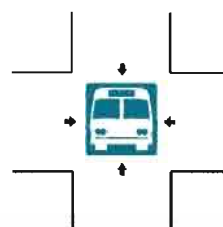
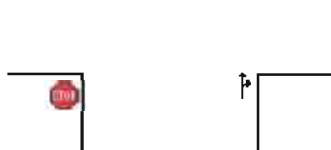
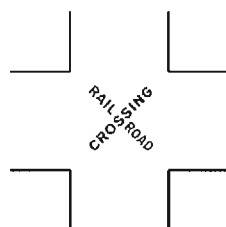
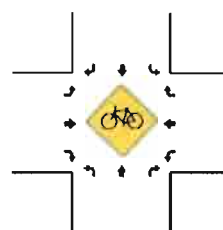
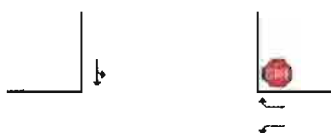
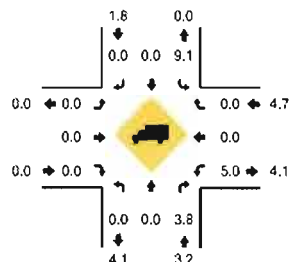
2007 Automatic Traffic Recorder (ATR) Data, Station 33-001 Rowena

Highest Hour	Month	Date	Day	EB Volume	WB Volume	Combined Volume	Hour	Notes
1	11	25	SUN	1395	1791	3186	15	
2	11	25	SUN	1198	1859	3057	16	
3	9	3	MON	1160	1767	2927	15	
4	11	21	WED	1373	1517	2890	15	
5	11	25	SUN	1437	1445	2882	14	
6	5	28	MON	981	1867	2848	16	
7	9	3	MON	1132	1700	2832	14	
8	9	3	MON	1069	1746	2815	16	
9	11	21	WED	1293	1488	2781	16	
10	5	28	MON	912	1859	2771	15	
11	8	12	SUN	1159	1604	2763	16	
12	11	25	SUN	1044	1684	2728	17	
13	5	28	MON	990	1695	2685	14	
14	9	3	MON	1019	1660	2679	17	
15	8	31	FRI	1473	1178	2651	16	
16	11	25	SUN	1453	1194	2647	13	
17	5	28	MON	887	1727	2614	17	
18	11	21	WED	1247	1345	2592	17	
19	7	29	SUN	1185	1392	2577	15	
20	9	3	MON	1103	1466	2569	13	
21	8	5	SUN	1140	1428	2568	16	
22	8	12	SUN	1203	1365	2568	15	
23	8	31	FRI	1423	1134	2557	15	
24	8	12	SUN	1299	1239	2538	14	
25	11	21	WED	1210	1322	2532	14	
26	8	5	SUN	1105	1419	2524	15	
27	8	26	SUN	1166	1353	2519	16	
28	7	29	SUN	1241	1276	2517	14	
29	7	22	SUN	1098	1415	2513	16	
30	7	29	SUN	1106	1407	2513	16	30th Highest Hour 3-4 PM
31	7	8	SUN	1082	1428	2510	15	
32	8	31	FRI	1406	1096	2502	14	
33	7	8	SUN	1067	1419	2486	16	
34	11	21	WED	1181	1305	2486	18	
35	8	19	SUN	1121	1361	2482	15	
36	8	5	SUN	1157	1323	2480	14	
37	7	20	FRI	1211	1260	2471	16	
38	8	31	FRI	1367	1095	2462	17	
39	8	12	SUN	988	1472	2460	17	
40	8	10	FRI	1182	1271	2453	16	
41	7	22	SUN	1112	1338	2450	15	
42	8	19	SUN	1153	1295	2448	14	
43	8	19	SUN	1086	1361	2447	16	
44	5	25	FRI	1428	1014	2442	18	
45	7	8	SUN	1110	1329	2439	14	
46	9	16	SUN	1019	1419	2438	15	
47	9	16	SUN	1079	1358	2437	14	
48	12	26	WED	1166	1271	2437	14	
49	8	19	SUN	959	1477	2436	17	
50	5	25	FRI	1467	964	2431	17	
51	5	25	FRI	1409	1018	2427	16	
52	8	3	FRI	1219	1200	2419	16	
53	8	26	SUN	1153	1265	2418	15	
54	8	12	SUN	1186	1229	2415	13	
55	7	15	SUN	1090	1323	2413	16	
56	7	29	SUN	1071	1339	2410	17	
57	7	8	SUN	996	1412	2408	17	
58	8	31	FRI	1327	1081	2408	18	

## **Traffic Counts – Sunday Peak Hour**

Method for determining peak hour: Total Entering Volume

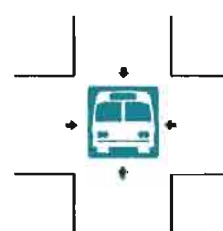
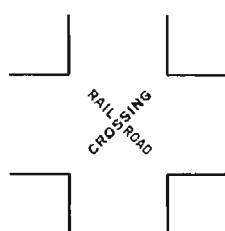
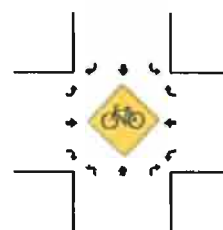
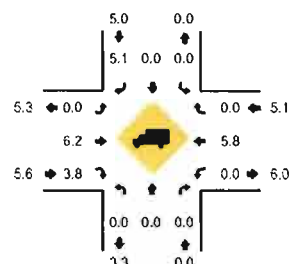
QC JOB #: 10461404  
DATE: 10/25/2009

[illegible]

Comments:

Method for determining peak hour: Total Entering Volume

QC JOB #: 10461405  
DATE: 10/25/2009



5-Min Count Period	I-84 EB/SB Ramp (Northbound)				I-84 EB/SB Ramp (Southbound)				Chenoweth Rd (Eastbound)				Chenoweth Rd (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:10 PM	0	0	0	0	0	0	16	0	0	10	5	0	0	4	0	0	35	
1:15 PM	0	0	0	0	0	0	17	0	0	9	1	0	1	5	0	0	33	
1:20 PM	0	0	0	0	0	0	23	0	0	10	1	0	0	7	0	0	41	
1:25 PM	0	0	0	0	1	0	13	0	0	15	4	0	0	3	0	0	36	
1:30 PM	0	0	0	0	0	0	7	0	0	10	3	0	1	3	0	0	24	
1:35 PM	0	0	0	0	2	0	7	0	0	7	4	0	0	6	0	0	26	
1:40 PM	0	0	0	0	0	0	15	0	0	13	6	0	2	4	0	0	40	
1:45 PM	0	0	0	0	0	0	12	0	0	17	5	0	0	5	0	0	39	
1:50 PM	0	0	0	0	0	0	19	0	0	11	4	0	0	4	0	0	38	
1:55 PM	0	0	0	0	0	0	10	0	0	9	4	0	0	4	0	0	27	
2:00 PM	0	0	0	0	0	1	20	0	0	8	3	0	2	2	0	0	36	419
2:05 PM	0	0	0	0	0	0	17	0	0	16	7	0	0	2	0	0	42	404
2:10 PM	0	0	0	0	0	0	15	0	0	13	7	0	0	3	0	0	38	417
2:15 PM	0	0	0	0	0	0	12	0	0	18	2	0	0	10	0	0	42	420
2:20 PM	0	0	0	0	0	0	13	0	0	5	5	0	1	4	0	0	28	423
2:25 PM	0	0	0	0	0	0	13	0	0	14	2	0	1	5	0	0	35	416
2:30 PM	0	0	0	0	1	0	17	0	0	8	5	0	1	4	0	0	36	415
2:35 PM	0	0	0	0	2	0	12	0	0	14	2	0	0	5	0	0	35	427
2:40 PM	0	0	0	0	1	0	13	0	0	8	4	0	1	4	0	0	31	436
2:45 PM	0	0	0	0	0	0	11	0	0	15	1	0	1	2	0	0	30	427
2:50 PM	0	0	0	0	0	0	10	0	0	14	4	0	0	12	0	0	40	418
2:55 PM	0	0	0	0	0	0	13	0	0	7	2	0	0	4	0	0	26	420
3:00 PM	0	0	0	0	0	0	11	0	0	6	5	0	1	6	0	0	29	419
3:05 PM	0	0	0	0	0	0	18	0	0	13	2	0	0	5	0	0	38	412
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
	0	0	0	0	0	0	176	0	0	188	64	0	0	80	0	0	488	
	0	0	0		0	0	16		0	4	0		0	8	0		28	
	0				0				0				0				0	
Stopped Buses																		

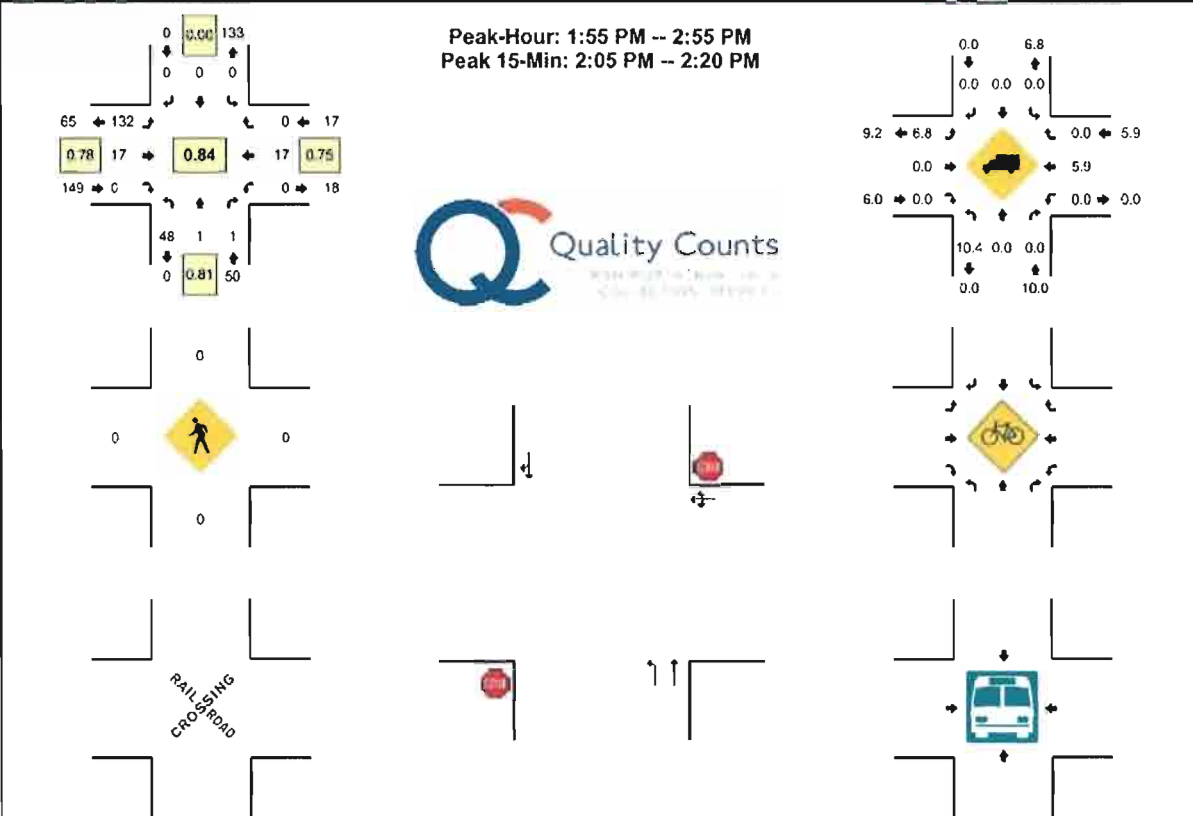
Comments:

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** I-84 WB/NB Ramp -- Chenoweth Rd  
**CITY/STATE:** The Dalles, OR

**QC JOB #:** 10461406  
**DATE:** 10/25/2009



5-Min Count Period Beginning At	I-84 WB/NB Ramp (Northbound)				I-84 WB/NB Ramp (Southbound)				Chenoweth Rd (Eastbound)				Chenoweth Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:25 PM	2	0	0	0	0	0	0	0	16	3	0	0	0	1	0	0	22	
1:30 PM	5	0	0	0	0	0	0	0	6	2	0	0	0	2	1	0	16	
1:35 PM	3	0	0	0	0	0	0	0	8	3	0	0	0	2	0	0	16	
1:40 PM	2	0	0	0	0	0	0	0	8	2	0	0	0	2	0	0	14	
1:45 PM	3	0	0	0	0	0	0	0	14	1	0	0	0	2	1	0	21	
1:50 PM	4	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	16	
1:55 PM	3	0	0	0	0	0	0	0	9	1	0	0	0	2	0	0	15	208
2:00 PM	2	1	0	0	0	0	0	0	7	1	0	0	0	1	0	0	12	199
2:05 PM	1	0	0	0	0	0	0	0	17	0	0	0	0	2	0	0	20	201
2:10 PM	4	0	0	0	0	0	0	0	11	2	0	0	0	0	0	0	17	205
2:15 PM	9	0	0	0	0	0	0	0	17	1	0	0	0	0	0	0	27	214
2:20 PM	3	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	9	205
2:25 PM	4	0	1	0	0	0	0	0	12	2	0	0	0	2	0	0	21	204
2:30 PM	4	0	0	0	0	0	0	0	9	0	0	0	0	1	0	0	14	202
2:35 PM	4	0	0	0	0	0	0	0	13	2	0	0	0	1	0	0	20	206
2:40 PM	3	0	0	0	0	0	0	0	6	3	0	0	0	2	0	0	14	206
2:45 PM	3	0	0	0	0	0	0	0	14	3	0	0	0	2	0	0	22	207
2:50 PM	0	0	0	0	0	0	0	0	11	2	0	0	0	4	0	0	25	216
2:55 PM	1	0	0	0	0	0	0	0	5	1	0	0	0	1	0	0	8	209
3:00 PM	6	0	0	0	0	0	0	0	4	2	0	0	0	2	1	0	15	212
3:05 PM	5	0	0	0	0	0	0	0	13	1	0	0	0	0	0	0	19	211
3:10 PM	7	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	19	213
3:15 PM	2	0	0	0	0	0	0	0	7	3	0	0	0	1	1	0	14	200
3:20 PM	3	0	0	0	0	0	0	0	14	1	0	0	0	2	0	0	20	211
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	56	0	0	0	0	0	0	0	180	12	0	0	0	8	0	0	256	
Heavy Trucks	8	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	16	
Pedestrians	0	0	0	0	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	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

Report generated on 10/28/2009 8:03 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

## Seasonal Adjustment Factor Calculations

---



2009 SEASONAL TREND TABLE																									Peak Period Seasonal Factor	
	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	25-Oct	1-Nov	15-Nov	1-Dec		15-Dec
INTERSTATE URBANIZED	1.082	1.000	0.964	0.928	0.925	0.922	0.917	0.913	0.919	0.925	0.914	0.903	0.898	0.894	0.896	0.898	0.917	0.936	0.933	0.931	0.944	0.953	0.974	1.069	1.165	0.8943
INTERSTATE NONURBANIZED	1.270	1.234	1.176	1.117	1.069	1.022	1.028	1.033	1.008	0.983	0.956	0.929	0.898	0.885	0.869	0.872	0.918	0.963	0.990	1.017	1.024	1.029	1.042	1.173	1.305	0.8661
COMMUTER	1.084	1.033	0.989	0.945	0.943	0.942	0.931	0.920	0.918	0.917	0.914	0.910	0.904	0.899	0.905	0.911	0.920	0.930	0.928	0.927	0.941	0.952	0.977	1.056	1.135	0.8988
COASTAL DESTINATION	1.240	1.198	1.142	1.085	1.067	1.049	1.060	1.071	1.043	1.015	0.988	0.961	0.902	0.842	0.844	0.845	0.889	0.933	0.987	1.041	1.071	1.092	1.143	1.213	1.283	0.8424
COASTAL DESTINATION ROUTE	1.519	1.455	1.363	1.271	1.227	1.183	1.197	1.211	1.139	1.066	1.021	0.978	0.895	0.813	0.805	0.797	0.866	0.934	1.032	1.130	1.165	1.190	1.251	1.417	1.583	0.7974
AGRICULTURE	1.198	1.178	1.108	1.038	1.027	1.017	0.996	0.975	0.955	0.935	0.928	0.921	0.901	0.882	0.890	0.898	0.903	0.908	0.925	0.942	0.960	0.972	1.001	1.109	1.217	0.8821
RECREATIONAL SUMMER	1.826	1.851	1.788	1.724	1.579	1.433	1.415	1.397	1.221	1.045	0.976	0.906	0.829	0.751	0.760	0.769	0.873	0.977	1.068	1.160	1.219	1.261	1.363	1.582	1.800	0.7506
RECREATIONAL SUMMER WINTER	1.381	1.158	1.258	1.358	1.353	1.348	1.551	1.753	1.696	1.639	1.409	1.179	1.035	0.890	0.898	0.905	1.054	1.202	1.438	1.673	1.779	1.854	2.035	1.820	1.605	0.8897
RECREATIONAL WINTER	1.848	0.843	0.930	1.018	1.038	1.058	1.311	1.563	2.199	2.835	2.321	1.807	1.504	1.200	1.193	1.186	1.275	1.364	1.548	1.734	2.124	2.397	3.058	2.956	2.852	0.8427
SUMMER	1.246	1.237	1.169	1.102	1.072	1.043	1.028	1.013	0.976	0.938	0.911	0.885	0.860	0.835	0.843	0.851	0.886	0.921	0.946	0.971	1.000	1.021	1.071	1.183	1.255	0.8345
SUMMER < 2500	1.356	1.408	1.334	1.260	1.193	1.125	1.087	1.050	0.985	0.921	0.891	0.861	0.838	0.817	0.820	0.823	0.822	0.820	0.861	0.902	0.941	0.968	1.035	1.169	1.304	0.8165

(Table Printed: 06/05/09)

Average for 25-Oct: 0.971      Avg of Peak SFs: 0.887

$$\frac{X}{X} = 1.120$$

## **Level of Service Descriptions**

---



## TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials.<sup>1</sup> The following two sections provide interpretations of the analysis approaches.

---

<sup>1</sup> 2000 *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2000, Chapters 16 and 17.

### UNSIGNALIZED INTERSECTIONS (Two-Way Stop Controlled)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *2000 Highway Capacity Manual* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service	Expected Delay	(Sec/Veh)
A	Little or no delay	0-10.0
B	Short traffic delay	>10.1-15.0
C	Average traffic delays	>15.1-25.0
D	Long traffic delays	>25.1-35.0
E	Very long traffic delays	>35.1-50.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 50

Source: 2000 *Highway Capacity Manual*, Transportation Research Board Washington, D.C.

## SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the HCM (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *2000 Highway Capacity Manual* provides the basis for these calculations.

Level of Service	Delay (secs.)	Description
A	≤10.00	<b>Free Flow/Insignificant Delays:</b> No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	10.1-20.0	<b>Stable Operation/Minimal Delays:</b> An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	20.1-35.0	<b>Stable Operation/Acceptable Delays:</b> Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	35.1-55.0	<b>Approaching Unstable/Tolerable Delays:</b> The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	55.1-80.0	<b>Unstable Operation/Significant Delays:</b> Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	>80.0	<b>Forced Flow/Excessive Delays:</b> Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C.

## **HCM Analysis – Existing**

---





## **HCM Analysis – 2010**

---





WMS Supplementary TIA Memo  
 Sunday Peak Hour  
 2010 Background

Level of Service Computation Report  
 2010 WMS Regionalized Method (Base Volume Alternative)  
 Intersection #3 I-84 NB Ramp/River Rd  
 Average Delay (sec/veh): 7.6 Worst Case Level of Service: E (1.1)  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled  
 Lanes: 3 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0  
 Volume Module: >> Count Date: 26 Oct 2009 << RT Starting 1:55 PM - 5:27  
 Base Vol: 59 1 1 0 0 161 21 0 24 4  
 Growth Adj: 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62 1.62  
 Initial Adj: 60 1 1 0 0 165 23 0 25 4  
 User Adj: 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88  
 PRF Adj: 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84  
 PRF Volume: 72 1 1 0 0 196 26 0 29 5  
 Request Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 Final Volume: 72 1 1 0 0 196 26 0 29 5  
 Critical Gap Module:  
 Critical Gap: 6.5 6.5 6.5 XXXX XXXX XXXX 4.2 XXXX XXXX XXXX XXXX XXXX  
 Followup Time: 3.6 4.1 3.4 XXXX XXXX XXXX 2.1 XXXX XXXX XXXX XXXX XXXX  
 Capacity Module:  
 Critical Vol: 428 452 26 XXXX XXXX XXXX 34 XXXX XXXX XXXX XXXX XXXX  
 Percent Cap.: 553 492 428 XXXX XXXX XXXX 1552 XXXX XXXX XXXX XXXX XXXX  
 Move Cap.: 499 429 1028 XXXX XXXX XXXX 1552 XXXX XXXX XXXX XXXX XXXX  
 Volume/Cap.: 0.14 0.10 0.00 XXXX XXXX XXXX 0.13 XXXX XXXX XXXX XXXX XXXX  
 Level of Service Module:  
 Delay/Sec: XXXX XXXX XXXX XXXX XXXX XXXX 3.4 XXXX XXXX XXXX XXXX XXXX  
 Control Delay: XXXX XXXX XXXX XXXX XXXX XXXX 7.7 XXXX XXXX XXXX XXXX XXXX  
 LOS by Movement:  
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
 Shared Cap.: XXXX 502 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX  
 Shared Delay: XXXX 5.5 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX  
 Shared Control Delay: 13.4 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX  
 Shared LOS: B  
 Approach: 13.4 XXXX XXXX  
 Approach LOS: S  
 Note: (Queue reported is the number of cars per lane.)



2010 Total (Sunday PM)

The Nov 12, 2009 3:47:53

Page 4-1

WMS Supplementary CIA Xmac

Sunday Peak Hour

2010 Total

Level Of Service Computation Report

2000 HCM Engineering Method (Future Volume Alternative)

Intersection #3 1-84 NB Rmp/River Rd

Average Delay (sec/veh): 5.6

Worst Case Level Of Service: C (17.3)

Approach: North Bound

South Bound

East Bound

West Bound

Movement: 1 - T - R

1 - T - R

1 - T - R

1 - T - R

Control: Stop Sign

Stop Sign

Uncontrolled

Uncontrolled

Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module: 25 Count Data: 25 Oct 2009 00:00 Starting: 1:55 PM + 527

Base Vol: 59 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Adj: 60 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Adjusted Vol: 60 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Converted: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Sat: 51 1 128 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Per AGI: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Per AGI: 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54 0.54

Per Volume: 61 1 154 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Volume: 61 1 154 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Capacity Module:

Critical Gap Module:

Critical Gap: 6.5 6.6 6.3 XXXX XXXX XXXX 4.2 XXXX XXXX XXXX XXXX XXXX

Followup Gap: 3.6 4.1 3.4 XXXX XXXX XXXX 2.3 XXXX XXXX XXXX XXXX XXXX

Capacity Module:

Capacity Vol: 921 919 215 XXXX XXXX XXXX 312 XXXX XXXX XXXX XXXX XXXX

Per AGI: 280 242 503 XXXX XXXX XXXX 1165 XXXX XXXX XXXX XXXX XXXX

Per AGI: 280 242 503 XXXX XXXX XXXX 1165 XXXX XXXX XXXX XXXX XXXX

Per Volume: 0.24 0.11 0.19 XXXX XXXX XXXX 0.17 XXXX XXXX XXXX XXXX XXXX

Level Of Service Module:

Delaying: XXXX XXXX XXXX XXXX XXXX XXXX 0.6 XXXX XXXX XXXX XXXX XXXX

Control: Pol: XXXX XXXX XXXX XXXX XXXX XXXX 3.7 XXXX XXXX XXXX XXXX XXXX

LOS by Move:

LOS by Move: 17 - LTR - RT 17 - LTR - RT 17 - LTR - RT 17 - LTR - RT

LOS by Move: 17 - LTR - RT 17 - LTR - RT 17 - LTR - RT 17 - LTR - RT

Shared Cap: XXXX 492 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

Shared Queue: XXXX 4.2 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

Shared Delay: XXXX 17.9 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX

Shared LOS: C

Shared LOS: C

Approach LOS: C

Approach LOS: C

Note: Queue reported for the number of each per lane.

Traffic 7.9.0415 (c) 2007 Peeling Assoc. Licensed to DKS ASSOC., PORTLAND, OR

## **HCM Analysis – 2027**

---

WAS Supplemental CJA Memo  
Sunday Peak Hour  
2027 Background

Level of Service Computation Report  
2007 Red Unsimplified Method (Base Volume Alternative)  
Intersection #1 6th St-SW 30th River Rd  
Average Delay (sec/Veh): 10.8 Worst Case Level of Service: C (22.7)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 1  
Volume Module: >> Count Date: 25 Oct 2009 << Starting 1:35 PM - SAT  
Base Vol: 0 39 729 18 35 3 0 0 0 211 0 15  
Growth Adj: 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41  
Initial Adj: 0 35 729 18 35 3 0 0 0 211 0 15  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
SFR Adj: 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59  
SFR Volume: 0 62 362 21 37 0 0 0 0 431 0 24  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Final Volume: 0 62 362 21 37 0 0 0 0 431 0 24  
Critical Gap Module:  
Critical Gap: 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1  
Follow-Up Time: 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2  
Capacity Module:  
Conflict Vol: 424 424 424 424 424 424 424 424 424 424 424  
Potential Cap: 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155  
Mov Cap: 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155  
Volume/Cap: 0.37 0.37 0.37 0.37 0.37 0.37 0.37 0.37 0.37 0.37 0.37  
Level of Service Module:  
2wayStop: 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1  
Control Del: 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2  
LOS by Mov: A A A A A A A A A A A  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap: 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155  
Shared Queue: 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155 1155  
Shared Delay: 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1  
Shared LOS: C C C C C C C C C C C  
Approach Del: 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1  
Approach LOS: C C C C C C C C C C C  
Note: Queue reported is the number of cars per lane.

Traffic 7.9.0410 (U) 2007 Dowling Assoc. Licensed to DKS Assoc., Portland, OR

WAS Supplemental CJA Memo  
Sunday Peak Hour  
2027 Background

Level of Service Computation Report  
2007 Red Unsimplified Method (Base Volume Alternative)  
Intersection #2 I-54 EB Ramp/Silver Rd  
Average Delay (sec/Veh): 4.6 Worst Case Level of Service: B (11.1)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0  
Volume Module: >> Count Date: 25 Oct 2009 << Starting 1:00 PM - SAT  
Base Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Growth Adj: 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41 1.41  
Initial Adj: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
SFR Adj: 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59 0.59  
SFR Volume: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Final Volume: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
Critical Gap Module:  
Critical Gap: 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4  
Follow-Up Time: 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5  
Capacity Module:  
Conflict Vol: 432 432 432 432 432 432 432 432 432 432 432 432 432 432 432 432 432  
Potential Cap: 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538  
Mov Cap: 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538  
Volume/Cap: 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80  
Level of Service Module:  
2wayStop: 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1  
Control Del: 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2  
LOS by Mov: A A A A A A A A A A A A A A A A A  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap: 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538  
Shared Queue: 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538 538  
Shared Delay: 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1  
Shared LOS: C C C C C C C C C C C C C C C C C  
Approach Del: 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1 11.1  
Approach LOS: C C C C C C C C C C C C C C C C C  
Note: Queue reported is the number of cars per lane.

Traffic 7.9.0410 (U) 2007 Dowling Assoc. Licensed to DKS Assoc., Portland, OR



Level of Service Corporation Report  
2005 HCM Localized Needs Planning and Budgeting

```

Intersection : 6th E-Way 37/41/60 Rd
Average Delay :sec(veh): 17.1 Rural case level of service: E1 36.11
Approach: North Bound South Bound East Bound West Bound
Movement: 1 - T - 8 1 - T - 3 1 - T - 3 1 - T - 3

```

Level Of Service Computation Report  
2003 ECM Unsolicited Washed Future Volume Alternative

<u>Intersection R2 I-64 EB Ramp/River Rd</u>						
Average Delay [sec/vhl]	:	: 67 :	Northeast Level of Service:	C 1.9 :		
Applicant:	:	:	North Bound South Bound East Bound West Bound	:		
Movement:	:	L - T - R L - T - R L - T - R L - T - R	:	:		





## **HCM Analysis – 2027 Mitigated**

# HCM Unsignalized Intersection Capacity Analysis 1: River Rd. & 6th Street

WM3 Additional Sunday Analysis  
2030 Sunday Peak Hour (Mitigated)

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑	↔	↔	↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	437	30	55	373	28	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	460	32	58	393	27	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (s)						
pX, platoon unblocked						
vC, conflicting volume	185	58			451	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	58			451	
IC, single (s)	6.5	6.2			4.2	
IC, 2 stage (s)						
IF (s)	3.6	3.3			2.3	
pO queue frac %	40	97			97	
cM capacity (veh/h)	765	1014			1074	
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	460	32	58	393	27	82
Volume Left	460	C	C	0	27	0
Volume Right	0	32	0	393	0	0
cSH	765	1014	1706	1700	1074	1700
Volume to Capacity	0.60	0.03	0.03	0.23	0.03	0.05
Queue Length 95th (ft)	102	2	C	0	2	0
Control Delay (s)	16.5	8.7	0.0	0.0	8.4	0.0
Lane LOS	C	A			A	
Approach Delay (s)	16.0		0.0		2.1	
Approach LOS	C					
Intersection Summary						
Average Delay			7.7			
Intersection Capacity Utilization			41.2%		ICU Level of Service	A
Analysis Period (min)			15			

# HCM Signalized Intersection Capacity Analysis 2: River Rd. & Hwy 2 EB Ramp

WM3 Additional Sunday Analysis  
2030 Sunday Peak Hour (Mitigated)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00					1.00	1.00	
Fr		0.97		1.00	1.00					1.00	0.85	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1544		1614	1699					1539	1377	
Flt Permitted		1.00		0.44	1.00					0.95	1.00	
Satd. Flow (perm)		1544		758	1699					1539	1377	
Volume (vph)	0	311	89	122	178	0	0	0	0	106	0	289
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	327	94	128	187	0	0	0	0	112	0	304
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	258
Lane Group Flow (vph)	0	410	0	128	187	0	0	0	0	112	0	46
Heavy Vehicles (%)	0%	7%	20%	3%	3%	0%	0%	0%	0%	0%	0%	5%
Turn Type				prmt						custom		custom
Protected Phases		2		1	6							
Permitted Phases				8						4		4
Actuated Green, G (s)		37.9		51.5	51.5					10.5		10.5
Effective Green, g (s)		37.9		51.5	51.5					10.5		10.5
Actuated g/C Ratio		0.54		0.74	0.74					0.15		0.15
Clearance Time (s)		4.0		4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		836		674	1250					231		207
v/s Ratio Prot		0.27		0.03	0.11					0.07		0.03
v/s Ratio Perm				0.11								0.03
v/c Ratio		0.49		0.19	0.15					0.48		0.22
Uniform Delay, d1		10.0		4.9	2.7					27.3		26.2
Progression Factor		1.00		0.61	0.68					1.00		1.00
Incremental Delay, d2		2.0		0.1	0.2					1.6		0.6
Delay (s)		12.1		3.1	2.1					28.9		26.7
Level of Service		B		A	A					C		C
Approach Delay (s)		12.1			2.5			0.0			27.3	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay		14.8						HCM Level of Service		B		
HCM Volume to Capacity ratio		0.41										
Actuated Cycle Length (s)		70.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		56.2%						ICU Level of Service		B		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
3: River Rd. & Hwy 2 WB Ramp

WM3 Additional Sunday Analysis  
2033 Sunday Peak Hour (Mitigated)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑		←	↑		←	↑		←	↑	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Fr	1.00	1.00			0.95			0.91			0.91	
Flt Protected	0.95	1.00			1.00			0.95			0.95	
Satd. Flow (prot)	1511	1750			1624			1521			1521	
Flt Permitted	0.45	1.00			1.00			0.95			0.95	
Satd. Flow (perm)	709	1750			1624			1521			1521	
Volume (vph)	228	189	0	0	225	99	74	1	129	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	240	199	0	0	237	104	78	1	136	0	0	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	89	0	0	0	0
Lane Group Flow (vph)	240	199	0	0	319	0	0	125	0	0	0	0
Heavy Vehicles (%)	10%	0%	6%	0%	3%	4%	5%	66%	2%	2%	2%	2%
Turn Type	pm+pt						Split					
Protected Phases	5				6		8					
Permitted Phases	2						8					
Actuated Green, G (s)	46.0	46.0			35.0			16.0				
Effective Green, g (s)	46.0	46.0			35.0			16.0				
Actuated g/C Ratio	0.66	0.66			0.51			0.23				
Clearance Time (s)	4.0	4.0			4.0			4.0				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (voh)	535	1150			535			348				
w/s Ratio Prot	0.04	0.11			0.20			0.08				
w/s Ratio Perm	0.26											
w/o Ratio	0.45	0.17			0.38			0.36				
Uniform Delay, d1	5.5	4.3			10.3			22.7				
Progression Factor	0.23	0.20			1.00			1.00				
Incremental Delay, d2	0.5	0.3			1.3			2.9				
Delay (s)	1.5	1.2			11.6			25.6				
Level of Service	A	A			B			C				
Approach Delay (s)		1.5			11.6			25.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Adjusted Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			





**CITY of THE DALLES**  
313 COURT STREET  
THE DALLES, OREGON 97058

(541) 296-5481  
FAX (541) 296-6906

## **AGENDA STAFF REPORT**

### **CITY OF THE DALLES**

MEETING DATE	AGENDA LOCATION	AGENDA REPORT #
December 14, 2009	Action Items 12, A	09-091

**TO:** Honorable Mayor and City Council

**FROM:** Kate Mast, Finance Director

**THRU:** Nolan Young, City Manager *ny*

**DATE:** November 25, 2009

**ISSUES:** Resolution No. 09-037 Adopting a Supplemental Budget for Fiscal Year 2009/2010, Making Appropriations and Authorizing Expenditures from and within the General Fund (001), the Sewer Special Reserve Fund (056), the Capital Projects Fund (037), and the Special Grants Fund (018).

**BACKGROUND:** During the budget process each year staff estimates conservatively for beginning balances or rollovers for each fund for the next year. When the actual beginning balances are known upon the completion of the audit, it is usual for those to be higher than the estimates. As the current fiscal year progresses, items are identified that were not included in the original budgets that require allocations during the year. This proposed supplemental budget uses a portion of the additional beginning balances as resources to allocate for these newly identified items as follows:

General Fund (001) – use of additional beginning balance = \$10,567 for:

- Staff recently discovered that three (3) Sewer SCD payments (\$5,367) were received in FY07/08 that were incorrectly posted to the General Fund. In order to properly account for those SDC payments, which are restricted funds, they must be transferred into the Sewer Special Reserve Fund (053).

- Council authorized an extension of the temporary position “Management Intern” through December 31, 2009, so additional funds (\$5,200) must be allocated for wages and taxes for that position in the General Fund (001).

Capital Projects Fund (037) – use of additional beginning balance = \$13,675 for

- Payment of the Standard & Poor’s bill (\$8,625) for review of the City’s rating of AA for the 2009 FFCO Bond.
- Payment of Jeff Tashman bills (total \$5,050) for development and publishing of his analysis and report on the Urban Renewal financial projections for 2009 FFCO Bond.

Other items included in this proposed supplemental budget are:

- The Sewer Reserve Fund (056) must receive the SDC funds (\$5,367) from the General Fund and allocate them to the Capital Outlay category.
- Staff recently learned that an Oregon Commission on Historic Cemeteries (OCHC) grant for \$1,000 has been awarded for the entry way and fencing of the cemetery, which should be received and allocated in the Special Grants Fund (018).

Oregon Budget Law recognizes that such changes in needs and expectations are inevitable and allows for the use of supplemental budgets to make these changes during a fiscal year.

**BUDGET IMPLICATIONS:** This supplemental budget adds \$10,567 to the General Fund, \$5,367 to the Sewer Special Reserve Fund, \$13,675 to the Capital Projects Fund, and \$1,000 to the Special Grants Fund, for a total addition to the City budget of \$30,609.

**PUBLIC NOTICE REQUIRED:** Oregon Budget Law requires that a Public Hearing be held before adopting any supplemental budget that exceeds ten percent (10%) of the receiving fund. A Public Hearing is not required for this proposed supplemental budget as the changes within each fund are less than 10%. However, a Public Notice is required to be published for any Supplemental Budget, and notice for this proposed Supplemental Budget will be published in The Dalles Chronicle on Sunday, December 5, 2009.

#### **ALTERNATIVES:**

- A. **Staff Recommendation:** *Move to adopt Resolution No. 09-037 Adopting a Supplemental Budget for Fiscal Year 2009/2010, Making Appropriations and Authorizing Expenditures from and within the General Fund (001), the Sewer Special Reserve Fund (056), the Capital Projects Fund (037), and the Special Grants Fund (018).*
- B. Decline to approve the proposed Resolution.

## **RESOLUTION NO. 09-037**

### **A RESOLUTION ADOPTING A SUPPLEMENTAL BUDGET FOR FISCAL YEAR 2009/2010, MAKING APPROPRIATIONS AND AUTHORIZING EXPENDITURES FROM AND WITHIN THE GENERAL FUND (001), THE SEWER SPECIAL RESERVE FUND (056), THE CAPITAL PROJECTS FUND (037), AND THE SPECIAL GRANTS FUND (018)**

**WHEREAS**, several of the City's funds realized larger beginning balance rollovers from the prior year in FY09/10; and

**WHEREAS**, the City wishes to allocate some of those additional beginning balance monies to the following uses:

- 1) transfer three Sewer SDC payments received in FY07/08 and posted incorrectly to the General Fund to the Sewer Reserve Fund (056) = Total \$5,367.00;
- 2) extend the Management Intern position from two months, from October 31 through December 31, 2009 = Total \$5,200.00;
- 3) allocate monies in Fund 037 to pay for the Standard & Poor's rating review (\$8,625.00) and the Urban Renewal analysis by Jeff Tashman (\$5,050.00) associated with the 2009 FFCO bond sale = Total \$13,675.00.

**WHEREAS**, additional state funds in the amount of \$1,000 have been awarded to the City in the form of an Oregon Commission on Historic Cemeteries (OCHC); and

**WHEREAS**, a supplemental budget is required in order for the City to allocate and expend those funds in FY09/10; and

**WHEREAS**, a public hearing is not required by Oregon Budget Law since the totals of this supplemental budget within each fund do not exceed ten percent (10%) of the receiving funds;

### **NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL AS FOLLOWS:**

Section 1. The City Council hereby adopts the following Supplemental Budget for FY09/10, increasing revenues and making appropriations as shown below.

<b>Summary of Supplemental Budget</b>				
<b>Fund</b>	<b>Resource</b>	<b>Amount</b>	<b>Requirement</b>	<b>Amount</b>
General Fund (001)	Additional Beginning Balance	10,567	City Manager Dept - Management Intern	5,200
			Interfund Transfer Sewer SDC's from 2007	5,367
Sewer Reserve Fund (056)	Receipt of Sewer SCD's from General	5,367	Capital Outlay	5,367

Capital Projects Fund (037)	Additional Beginning Balance	13,675	Materials & Services East Port LID Dept	13,675
Special Grants Fund (018)	OCHC State Grant Award	1,000	Materials & Services - Cemetery entrance/fence	1,000
	<b>Total Resources</b>	<b>30,609</b>	<b>Total Requirements</b>	<b>30,609</b>

<b>Summary of Supplemental Budget – Total Changes to Fund Budgets</b>				
<b>Fund</b>	<b>Category</b>	<b>Original Budget</b>	<b>Change</b>	<b>Amended Budget</b>
General Fund (001)	City Manager Dept	275,284	5,200	280,484
	Interfund Transfers	113,806	5,367	119,173
	<b>Fund 001 Totals</b>	<b>389,090</b>	<b>10,567</b>	<b>399,657</b>
Sewer Reserve Fund (056)	Capital Outlay	1,765,213	5,367	1,770,580
Capital Projects Fund (037)	Capital Outlay	3,307,413	13,675	3,321,088
Special Grants Fund (018)	Materials & Services	508,000	1,000	509,000
	<b>Total All Funds</b>	<b>5,969,716</b>	<b>30,609</b>	<b>6,000,325</b>

Section 2. This Resolution shall become effective upon adoption by the City Council and shall remain in effect until receipt and acceptance of the FY09/10 audit report.

**PASSED AND ADOPTED THIS 14th DAY OF DECEMBER, 2009**

Voting Yes, Councilors: \_\_\_\_\_  
Voting No, Councilors: \_\_\_\_\_  
Absent, Councilors: \_\_\_\_\_  
Abstaining, Councilors: \_\_\_\_\_

**AND APPROVED BY THE MAYOR THIS 14th DAY OF DECEMBER, 2009**

SIGNED: \_\_\_\_\_ ATTEST: \_\_\_\_\_

\_\_\_\_\_  
Nikki L. Lesich, Mayor

\_\_\_\_\_  
Julie Krueger, MMC, City Clerk





## CITY of THE DALLES

313 COURT STREET  
THE DALLES, OREGON 97058

(541) 296-5481  
FAX (541) 296-6906

### AGENDA STAFF REPORT CITY OF THE DALLES

MEETING DATE	AGENDA LOCATION	AGENDA REPORT #
December 14, 2009	Action Items 12, B	09-092

**TO:** Honorable Mayor and City Council

**FROM:** Kate Mast, Finance Director

**THRU:** Nolan K. Young, City Manager

**DATE:** November 25, 2009

**ISSUE:** Resolution No. 09-038 Authorizing Transfers of Budget Funds between Departments and Categories of the Sewer Reserve Fund (053) for the Fiscal Year Ending June 30, 2010.

**BACKGROUND:** The original budget for Fund 53 was adopted with the anticipated \$6,000,000 in revenues from the stimulus funds and a corresponding expense in the Capital Outlay category. Staff has since learned that these funds are required to be accounted for in a separate department from other monies in the fund. This resolution creates a separate Terminal Reservoir Department and reallocates the ARRA funds to that new Department. It also separates the revenue line items for the grant and loan portions of the ARRA funds to be received.

**BUDGET IMPLICATIONS:** Resolution No. 09-038 does not change the total amount of the budget in the affected fund. It only reallocates previously budgeted amounts within Fund 053.

**ALTERNATIVES:**

- A. **Staff Recommendation:** Move to adopt Resolution No. 09-038 Authorizing Transfers of Budget Funds between Departments and Categories of the Sewer Reserve Fund (053) for the Fiscal Year Ending June 30, 2010.
- B. Decline to adopt the proposed Resolution and leave the original budget allocations as they are. This may cause a non-compliance issue for the City that would result in requiring repayment of the grant/forgivable loan portion of the ARRA funds.



**RESOLUTION NO. 09-038**

**A RESOLUTION AUTHORIZING TRANSFERS OF BUDGET FUNDS  
BETWEEN DEPARTMENTS AND CATEGORIES OF THE SEWER  
RESERVE FUND (053) FOR THE FISCAL YEAR ENDING JUNE 30, 2010**

**WHEREAS**, the City has been awarded American Recovery and Reinvestment Act (ARRA) federal stimulus funds for the Terminal Reservoir Project; and

**WHEREAS**, in anticipation of those funds the City originally budgeted to receive and expend those monies in the general Capital Outlay category of the Water Capital Reserve Fund 053; and

**WHEREAS**, it is required that those funds be accounted for in a separate department from other expenditures within the receiving fund; and

**WHEREAS**, Oregon Budget Law allows for such changes as needed during the course of the fiscal year;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL AS  
FOLLOWS:**

**Section 1. Authorizing the Creation of a New Department.** The City Council hereby authorizes the creation of the Terminal Reservoir Department within Fund 53 to provide separate accounting for the federal ARRA funds as required by the contract to receive those funds.

**Section 2. Authorizing Transfers of Budgeted Amounts to the New Department.** The City Council hereby authorizes the following transfers of funds between budgeted categories and the new Department categories:

<u>FUND OR DEPT.</u>	<u>BUDGETED</u>	<u>RESOURCES NEEDED</u>	<u>REALLOCATED</u>
<b><u>WATER CAPITAL RESERVE FUND (053)</u></b>			
transferred from Capital Outlay -	\$ 7,535,352	\$ 1,557,807	- \$ 5,977,545
transferred to Capital Outlay - Terminal Reservoir Department	\$ 0	\$ 5,977,545	+\$ 5,977,545

**Section 3. Adjusting Revenue Line Items.** The City Council hereby authorizes the following adjustments to Revenue line items to further clarify the receipt of the federal ARRA funds:

<b><u>FUND 053 REVENUE</u></b>	<b><u>BUDGETED</u></b>	<b><u>RESOURCES NEEDED</u></b>	<b><u>ADJUSTMENT</u></b>
053-0000-331.31-20 Fed Grants – Economic Stimulus	\$ 6,000,000	\$ 22,455	- \$ 5,977,545
053-0000-331.31-21 Fed Grants – ARRA Grant	\$ 0	\$ 2,988,773	+ \$ 2,988,773
053-0000-393.10-21 Loan Proceeds – ARRA Loans	\$ 0	\$ 2,988,772	+\$ 2,988,772

**Section 4. Effective Date.** This Resolution shall become effective upon adoption and shall remain in effect until receipt and acceptance of the FY09/10 audit report.

**PASSED AND ADOPTED THIS 14th DAY OF DECEMBER, 2009.**

Voting Yes, Councilors: \_\_\_\_\_  
Voting No, Councilors: \_\_\_\_\_  
Absent, Councilors: \_\_\_\_\_  
Abstaining, Councilors: \_\_\_\_\_

**AND APPROVED BY THE MAYOR THIS 14th DAY OF DECEMBER, 2009.**

SIGNED:

ATTEST:

\_\_\_\_\_  
Nikki L. Lesich, Mayor

\_\_\_\_\_  
Julie Krueger, MMC, City Clerk