



TRANSPORTATION MODEL ADVISORY COMMITTEE

December 22, 2009 – 1:30 PM – 3:30 PM

Community Planning Association

Notice: This packet contains only the documents listed with an asterisk (*) in the agenda. The entire packet, including all attachments is available at <http://www.compassidaho.org/committees/tmac/agenda>. The online document requires Adobe Acrobat to read it; COMPASS' homepage <http://www.compassidaho.org> contains a free download link if you need a copy. The online document includes bookmarks at the left of the screen that are named to correspond to agenda items that have attachments. Clicking on a bookmark will take you directly to the named document.

** AGENDA **

I. AGENDA ADDITIONS/CHANGES

1:30

II. OPEN DISCUSSION/ANNOUNCEMENTS

1:40 A. Introductions

III. CONSENT AGENDA

1:45 *A. Approve July 30, 2009 Meeting Minutes

IV. ACTION ITEMS

1:55 A. Chair and Vice Chair Elections

TMAC members will be asked to nominate and elect a new Chair and Vice Chair. These two positions are currently held by Gary Sanderson (served as Chair for three years) and Karen Gallagher (served as Vice Chair for two years).

V. INFORMATION/DISCUSSION ITEMS

2:15 *A. 2008 Travel Demand Model Update

Staff will provide an update on the model calibration progress.

**MaryAnn
Waldinger**

2:45 B. *Communities in Motion (CIM) Update Status*

Staff will provide a status report on the CIM update.

**MaryAnn
Waldinger**

VI. OTHER

3:00 A. Next Meeting

VII. PUBLIC AGENCY MEMBER SESSION

3:05 A. Consultant Selection

Public agency attendees will select two applicants from the private sector to serve a two-year term beginning January 2010. These two seats are currently held by Jim Pline, Pline Engineering and Kent Fugal, Project Engineering Consultants, Ltd. The applications received will be handed out at the meeting.

VIII. ADJOURNMENT

3:30

***Enclosures**

Times are approximate. Agenda is subject to change.

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TRANSPORTATION MODEL ADVISORY COMMITTEE

JULY 30, 2009

COMMUNITY PLANNING ASSOCIATION

MINUTES

ATTENDEES: Tim Curns, City of Meridian (*for Matt Ellsworth*)
 Kent Fugal, Project Engineering Consultants, Ltd.
 Karen Gallagher, City of Boise, **Vice Chair**
 Stephen Lewis, Project Engineering Consultants, Ltd. (*for Kent Fugal*)
 Shawn Martin, Ada County Highway District
 Amar Pillai, Ada County Highway District
 Sherri Pillow, Ada County Information Technology
 Jim Pline, Pline Engineering, Inc.
 Tim Richard, Canyon Highway District #4
 Kevin Sablan, Idaho Transportation Department
 Gary Sanderson, Idaho Transportation Department, **Chair**
 Sai Kumar Sarepalli, Holladay Engineering Company (*for Vern Brewer*)
 Timothy Wagner, CH2M Hill
 Jay Witt, URS Washington Division

MEMBERS ABSENT: Clair Bowman, City of Nampa
 Kelli Fairless, Valley Regional Transit
 Jorge Garcia, Department of Environmental Quality
 Jeff Madsen, Public Participation Committee

OTHERS PRESENT: Carl Miller, COMPASS
 Ted Reynen, Keller Associates
 Brent Turley, The Transpo Group
 MaryAnn Waldinger, COMPASS
 Debbie Winchar, COMPASS

CALL TO ORDER

Chair Sanderson called the meeting to order at 1:34 p.m.

AGENDA ADDITIONS/CHANGES

None.

OPEN DISCUSSION/ANNOUNCEMENTS

A. Introductions were made of all attendees.

CONSENT AGENDA

A. Approve May 28, 2009 Meeting Minutes

Jim Voorhees moved and Shawn Martin seconded to approve the May 28, 2009 meeting minutes as written. There being no further discussion, the motion was unanimously approved.

INFORMATION/DISCUSSION ITEMS

A. 2008 Model Update Task List and Status

MaryAnn Waldinger reviewed the status of the 2008 Model update.

Discussion:

Trip Distribution

- Change #19 - Interstate ramps speed to 45 mph.
- Daily Factors: Have validation scripts been run using a daily capacity based on 11 or 12 percent; it may help validation.

MaryAnn replied that moving to 11 or 12 percent is not going to impact the base year but will be a more important issue for the out years when there is more congestion.

- An internal comparison would be helpful.

MaryAnn commented a 2008 set of model runs which was done for the Adequate Public Facilities Ordinances with Ada County Highway District. MaryAnn said she would do runs at 11 and 12 percent while looking at vehicle miles traveled and average trip lengths, and pull in some traffic forecast changes.

- Measures of effectiveness: A percent of links over capacity that could be used as a comparison.
- Turn Penalties: Change #3 to read: "Boise Ave. can't turn **left on** University Dr. or Capital Blvd."
- Change #8 to read: - "Cole/Overland IC eastbound off ramp can't go eastbound on Overland Rd or access Entertainment Dr. **southbound.**"
- Peak Hour 1: Calibrate before the daily model first then work on peak hour 1.

B. 2035 and Preservation Demographics

Carl Miller presented a status update on the 2035 demographics for the *Communities in Motion* update and preservation scenario.

OTHER

A. Next Meeting: Thursday, September 24, 2009, 1:30 p.m., at COMPASS.

Chair Sanderson commented that the Idaho Transportation Department has almost finished processing the congestion data for the two-county area. Using the ITD standard of congestion of travel times at 150% of ideal travel times, 2008 showed 27% of the facilities congested and 2009 went down to approximately 19%.

Adjournment

Karen Gallagher moved and Tim Wagoner seconded adjournment at 3:14 p.m. Motion carries.

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MEMORANDUM

To: Transportation Model Advisory Committee
FROM: MaryAnn Waldinger, Principal Planner
DATE: December 15, 2009
RE: 2008 Travel Demand Model Update

ACTION REQUESTED:

None. Information only.

BACKGROUND:

COMPASS staff began updating the 2002 regional travel demand model this summer with the completion and approval of the 2008 TAZ boundaries and corresponding demographics (April 2009).

COMPASS staff initiated a workgroup that was held on December 9, 2009 with six TMAC members. This workgroup discussed and developed options that may improve the model results in specific areas. Attachment 1 contains a detailed account of the issue, recommendation, status and results. These are for COMPASS staff benefit and contain the information most useful to the model update process.

STATUS:

As of December 15, 2009 the daily model has been calibrated however, COMPASS staff continues to make refinements based on the workgroup meeting. The peak hour model has not yet been run. COMPASS staff will hand out updated calibration statistics for the daily model and the peak hour model results at the December 22, 2009 meeting.

2008 Model Current Calibration Statistics – Daily

Percent Root Mean Square Error (RMSE) by Functional Class			
Facility Type	%RMSE	MAX	Validation
Interstate & Ramps	21.0%	< 40%	PASS
Principal Arterials	26.6%	< 40%	PASS
Minor Arterials	36.3%	< 40%	PASS
Collectors	74.4%	< 40%	
Locals	119.9%	< 40%	
Overall	36.5%	< 40%	PASS
Without Locals	35.2%	< 40%	PASS
Without Collectors and Locals	30.4%	< 40%	PASS
Model Volume to Actual Count Percent Difference by Functional Class			
Facility Type	Volume to Count % Difference	MAX	Validation
Interstate & Ramps	4.5%	< 7%	PASS
Principal Arterials	4.5%	< 10%	PASS
Minor Arterials	-2.5%	< 15%	PASS
Collectors	-18.8%	< 25%	PASS
Locals	18.7%	< 25%	PASS
Overall	0.3%		

R-Squared = 0.91 and Correlation coefficient = 0.96

Below are the calibration statistics from the 2002 model which are comparable to the 2008 model. The primary changes from the 2002 to 2008 model are TAZ refinement from 534 to 2,062 zones, refinement to the network by adding almost 400 centerline miles of roadway, using employment data from department of labor, updated number of households (2000 Census plus building permit activity), and more recent traffic counts.

2002 Model Calibration Statistics – Daily

Results are shown on page 41, Table 39 and Table 40 of the *2002 Travel Demand Forecast Model Calibration Report for Ada and Canyon Counties*.

Percent Root Mean Square Error (RMSE) by Functional Class			
Facility Type	%RMSE	MAX	Validation
Interstate & Ramps	23.9%	< 40%	PASS
Principal Arterials	22.1%	< 40%	PASS
Minor Arterials	39.0%	< 40%	PASS
Collectors	70.4%	< 40%	
Locals	82.2%	< 40%	
Overall	34.9%	< 40%	PASS
Without Locals	34.5%	< 40%	PASS
Without Collectors and Locals	28.9%	< 40%	PASS
Model Volume to Actual Count Percent Difference by Functional Class			
Facility Type	Volume to Count % Difference	MAX	Validation
Interstate & Ramps	-0.2%	< 7%	PASS
Principal Arterials	-4.4%	< 10%	PASS
Minor Arterials	-11.5%	< 15%	PASS
Collectors	-16.8%	< 25%	PASS
Locals	11.6%	< 25%	PASS
Overall	-7.6%		

R-Squared = 0.90 and Correlation coefficient = 0.96

Attachment - 1

The following is a list of items discussed on December 9, 2009 with six members from TMAC. This is not intended to be an exhaustive list of every nuance in the 2008 travel demand model.

Ada County

1. **Pine St/Executive and Emerald:** Model estimates are high near Eagle Rd due to posted speed differences along the corridor – 35 mph from Ten Mile to Meridian Rd, 25 mph from Meridian Rd to 5th St, 35 mph from 5th St to Eagle Rd and 30 mph east of Eagle Rd.
 - a. Workgroup Recommendation – Change to 30 mph except for short section between Meridian Rd and 5th.
 - b. Status – Completed. This change improved model estimates along Pine St/ Executive and Emerald. However, some traffic shifted to Franklin Rd. Westbound direction between Locust Grove Rd and Eagle Rd (only one mile) is running high.
2. **Meridian Rd/Main St Couplet:** Model estimates are low and high on Locust Grove Rd.
 - a. Workgroup Recommendation – Increase input speed to 35 mph.
 - b. Status – Completed. This change improved model estimates.
3. **Fairview Ave:** Model estimates are high in the EB direction into downtown Boise east of Eagle Rd, some of the sections are balanced and calibrated to counts.
 - a. I-84 model estimate is higher than actual count which could be due to construction. Therefore, Fairview Ave isn't carrying "extra" traffic.
 - b. Fairview Ave River crossing into downtown is also high.
 - c. I-184 is higher than count SW of Curtis IC but lower than count near the Chinden Blvd ramps.
 - d. Americana NE of Emerald St is low.
 - e. Staff Recommendation – This appears to be a model routing issue. Time based "path trace" indicates using Eagle Rd south to Franklin Rd to access I-184 is the quickest route. Franklin Rd has a 45 mph section. Changing this to 40 mph to keep the corridor consistent may help or could worsen the estimates on Fairview Ave.
4. **Northview St:** Low in the model for full length of corridor.
 - a. Workgroup Recommendation – increase input speed from 25 mph to 30 mph since this the speed limit people drive anyway.
 - b. Status – Completed. This change improved model estimates along Northview St.
5. **Ustick Rd/ Locust Grove Rd west leg (westbound direction) intersection:** Is high however, rest of corridor and surrounding area is calibrated.
 - a. Workgroup Recommendation – Look at internal circulation to/from schools (TAZ 901 and 933).
 - b. Status – Not done.
6. **Eagle Rd/Fairview Ave shopping center:** Model estimates are good but staff wanted to discuss the need to accommodate internal circulation.
 - a. Workgroup/staff Recommendation – Add in perimeter road through parking areas to connect Pine St to Records Ave.
 - b. Status – Completed. This addition resulted in slight improvements and reasonable loadings on this internal connectivity.
7. **Boise Towne square:** Most of the area is calibrated but, staff wanted to discuss possible options to improve model estimates.
 - a. Staff Recommendation - Add perimeter road.
 - b. Status – Tried it, it made estimates worse, therefore, removed it.
 - c. Workgroup Recommendation – Remove Steelhead Way Westpark St to Emerald St (Steelhead is a north/south road parallel to Benjamin).
 - d. Status – not done.
8. **Eagle downtown:** Model estimates are low on State St, around Edgewood Ln and low on Plaza St east of Eagle Rd. SH 44 is only 2,000 vehicle trips higher than actual count. This maybe an issue with trips in/out of centroids in this retail in the area. This area contains a grocery store with gas station, Starbucks, McDonalds, other specialty retail.

- a. Workgroup Recommendation – Consider special generating TAZs 728, 729, and 730.
 - b. Status – Not done.
 - c. Staff recommendation – Leave it alone. Eagle may have different trip generation rates but, this determination will have to wait until the next household travel survey (2011-2012).
9. **State St east of Ballantyne Ln:** Model estimates are low but high on Ballantyne Ln north of State St.
- a. Workgroup Recommendation: correct speed on State St to 35mph –
 - b. Status – Completed. No change in model estimates. SH 44 between Eagle Rd and Ballantyne Ln is high (35mph vs 55 mph – what would you drive?) both of these segments are unimpeded (no signals).
10. **Southeast Boise:**
- a. ParkCenter Blvd –Calibrated on most of corridor, low at Pennsylvania and Apple St. Apple St south of ParkCenter is also low. Counts for 2007 and 2009 were available and show little to no growth in traffic.
 - i. Apple St provides access to two retail areas and Gold’s Gym (high generator).
11. **Boise Ave:** model estimates are low along corridor, however, most sections are calibrated. The 2002 model had the same issue. this is due to Boise Ave at 30 mph, ParkCenter at 35 mph and Federal Way
- a. Workgroup Recommendation: Test changing speed limit to 35 mph.
 - b. Status – Not done.
12. **Iowa St:** Model estimates are high.
- a. Workgroup Recommendation: Corrected speed limit,
 - b. Status – Completed. This change improved model estimates.
13. **Boise State area:**
- a. Workgroup Discussion and observations:
 - b. Lincoln Ave, south of University Ave is high compared to old count from 2006 and prior to construction of the new parking garage. No updated count available.
 - c. Protest Hill – model estimates are high.
 - d. University at Broadway Ave – model estimates are low.
 - e. University at Capitol Blvd – model estimates are high.
 - f. River Crossings – 9th St, Capitol, Broadway and West ParkCenter are calibrated.
 - g. Some of these issues could be due to Boise Ave to Capitol Blvd and University Ave connectivity. However, most likely due to on-campus housing and actual internal trip capture.
 - h. Staff Recommendation – Leave it alone. Staff needs to research how best to handle universities and on-campus housing.
14. Other miscellaneous centroid modifications in various areas to help improve distribution.

Canyon County

Most of the areas needing improvements were rural areas with traffic counts less than 1,000 per day and in some cases fewer than 500. The workgroup agreed to leave those areas alone.

- 1. **Cemetery Rd:** correct speed limit to 45 mph north of Willis Rd.
- 2. **Middleton Rd north of Roosevelt:** model estimates are low and current traffic count shows a 1/3 to 2/3 split in traffic.
 - a. Workgroup Recommendation - Check with Nampa and verify traffic count.
 - b. Status – Completed. Received full set of counts on Middleton Rd and the directional split is 50/50. Model estimate is calibrated to the 2008 count.
- 3. **Linden St east and west of Middleton Rd** – model estimates are high.
 - a. Workgroup Recommendation – Delete 2006 counts and check if more recent counts exist.
 - b. Status – Completed. Canyon Highway District had 2008 count on Linden St east of Middleton. Model estimate is calibrated to the 2008 count.

4. **2nd St and Chicago:** model estimates are high. Model is routing traffic on 2nd St to access Amity Rd and Kings Corner Crossing
 - a. Workgroup Recommendation - No change, see if counts are available along this section of 2nd St.
 - b. Status – Completed. Model estimates are still high.
5. TAZs 2524 and 2523- 12th Ave Rd and Lake Lowell Ave – includes local circulation road, model estimates low on Lake Lowell Ave.
 - a. Adjust centroids because most traffic enters/exits on Lake Lowell Ave and possibly remove local circulation road.
 - b. Status – Completed. Adjusted centroids for TAZ 2524 and 2523.
6. Other miscellaneous centroid modifications in various areas to help improve distribution.

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