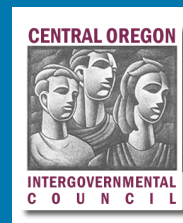




Central Oregon Intergovernmental Council

Central Oregon Strategic Transportation Options Plan

TAC Meeting #2 – November 30, 2012



DKS Associates
TRANSPORTATION SOLUTIONS



Agenda

- Project Goals
- Project Methodology
- Baseline Conditions
- Potential Multimodal Investments by Corridor
- Next Steps

COTOP Purpose & Goals

- **WHAT is COTOP?**
 - Long range plan to help ID cost-effective investments to meet long-term travel demand in Central OR
 - Focus on intercommunity trips on 8 primary corridors
 - ID the best mix of transportation investments
 - 2030 timeframe
 - Inform local plans and help provide foundation for multi-modal transportation policy

COTOP Purpose & Goals

■ WHY COTOP?

- Unlikely to be able to afford all planned transportation infrastructure improvements; COTOP is analyzing other alternative investments
- Support economic development by helping to meet TPR requirements
- Generate data-driven information on potential of different modes to meet overall transportation network goals
 - **In light of new multi-modal emphasis from the Governor's Office, ODOT, Mosaic/Least Cost Planning**

COTOP Purpose & Goals

- **Desired Outcomes of COTOP:**
 - Framework to realize cost-savings for overall regional transportation investments
 - Data-driven analysis of potential of other modes
 - Allows development of rational targets for multi-modal program development
 - Generates a rationally-based regional conversation that can be built on into the future. Not expected to answer all questions!
 - Analysis of potential for non-SOV modes to meet other policy goals:
 - Reduce greenhouse gas emissions
 - Increasing mobility for community members
 - Opportunities to inform and/or be informed by the Least Cost Planning initiative
 - Inputs to Trip97 Process

Overall Scope of Work

Scope of Work Activity	Lead
Public Involvement (Task 1)	COIC
Prior Technical Reports and Methodology Review (Task 2)	COIC & Consultants
Trip Forecast and Infrastructure Estimate (Task 3)	COIC Consultants (modeling)
Alternative Scenario Development and Cost Analysis (Task 4)	Consultants COIC
Public Policy Analysis process (Task 5)	COIC
Develop Implementation Plan (Task 6)	COIC
Final Strategic Plan Document (Task 7)	COIC

Project Methodology – see Methodology Memo

- Compare Potential Multimodal Transportation Investments to Baseline Case
- Definition of Baseline
 - 2030
 - Planned AND Financially Committed to:
 - Road projects
 - Transit services
 - TDM programs

Project Methodology

- Establish Alternative Scenarios for Analysis
- Alternative scenarios packages or suites of individual investments selected to:
 - Represent a cost-effective mix of transportation investments
 - Focus investments toward a few key strategic options
 - Tailor investments to individual corridor demands and characteristics
 - Highlight the sensitivity of key investment strategies in their effectiveness in meeting regional transportation needs

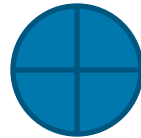
Project Methodology

- Strategic Options
 - Intercity Transit
 - Travel Demand Management
 - Vanpool/carpool
 - Pricing
 - Commuter Rail
 - Non-Financially Committed Road Projects

Strategy Package Development (Tech Memo 3)

Travel Markets

126, Sisters-Redmond
126, Redmond to Prineville
97, Madras-Redmond
97, Redmond-Bend
97, Bend-LaPine
26, Madras-Prineville
361, Culver & Metolius
20, Bend-Sisters



Market Characteristics

Pop/Emp Demographics
Travel Demand
Trip Purpose
Peaked vs. All-Day Travel



Package Development

Status Quo & up to 5 additional cases

Identify degree to which each transportation option contributes in each market

Different means for meeting regional goals

Sample Package Development

Package 1

- Baseline Conditions

Package 2

- Commuter rail (Bend-Redmond)
- Increased intercity bus other markets

Package 3

- Increased intercity bus all markets
- Vanpool Bend & Redmond to Prineville

Project Methodology

- Key Analysis Measures
 - Trip Forecasts
 - VMT Reduction
 - Greenhouse Gas Reduction
 - User Benefits and Costs
 - Transportation System Costs
 - Ability to meet state multi-modal transportation system goals
 - Ability to improve mobility/access options

Baseline Conditions – Travel Demand

Table2: 2030 Traffic Volumes and VMT by Corridor

	Segment	Length	Daily Volume	Daily VMT	PM Peak Hour Volume	PM Peak Hour VMT
1	OR 126; Sisters-Redmond (ODOT 15)	17.5	9,200	161,000	720	12,600
2	OR 126; Redmond-Prineville (ODOT 41)	15.0	12,700	190,500	870	13,100
3	US 97; Madras-Redmond (ODOT 4)	22.0	18,000	396,000	1,550	34,100
4	US 97; Redmond-Bend (ODOT 4)	10.5	37,800	396,900	3,110	32,700
5	US 97; Bend-La Pine (ODOT4)	23.7	20,700	490,600	1,780	42,200
6	US 26; Madras-Prineville (ODOT 360)	25.8	3,300	85,100	290	7,500
7	OR 361; Culver-Metolius (ODOT 361)	4.3	7,200	31,000	570	2,500
8	US 20; Bend-Sisters (ODOT 17)	17.3	12,300	212,800	1,080	18,700

Baseline Conditions – Travel Demand

Table3: 2030 Intercommunity Traffic Share by Corridor

Segment		Daily Intercommunity VMT	Daily Intercommunity Share of Corridor	PM Peak Intercommunity VMT	PM Peak Intercommunity Share of Corridor
1	OR 126; Sisters-Redmond (ODOT 15)	20,480	13%	1,680	13%
2	OR 126; Redmond-Prineville (ODOT 41)	49,350	26%	4,050	31%
3	US 97; Madras-Redmond (ODOT 4)	84,900	21%	6,970	20%
4	US 97; Redmond-Bend (ODOT 4)	233,210	59%	19,230	59%
5	US 97; Bend-La Pine (ODOT4)	22,680	5%	1,880	4%
6	US 26; Madras-Prineville (ODOT 360)	10,910	13%	890	12%
7	OR 361; Culver-Metolius (ODOT 361)	25,520	82% ¹	2,050	82%
8	US 20; Bend-Sisters (ODOT 17)	28,280	13%	2,340	13%

¹ This is overstated because the TAZs are significantly larger than the communities, and therefore represents travel in a large area beyond the boundaries of Culver and Metolius.

Baseline Conditions – Travel Demand

Table4a: 2030 Intercommunity Trip Purposes by Corridor– Daily

Segment		HBW	HBS	HBR	HBO	NHBW	NHBNW	HBCOLL	HBSCHE
1	OR 126; Sisters-Redmond (ODOT 15)	26%	9%	11%	11%	23%	20%	0%	0%
2	OR 126; Redmond-Prineville (ODOT 41)	22%	12%	11%	10%	27%	12%	7%	0%
3	US 97; Madras-Redmond (ODOT 4)	15%	20%	11%	10%	16%	10%	18%	0%
4	US 97; Redmond-Bend (ODOT 4)	33%	9%	7%	11%	16%	16%	9%	0%
5	US 97; Bend-La Pine (ODOT4)	55%	6%	4%	4%	11%	6%	14%	0%
6	US 26; Madras-Prineville (ODOT 360)	33%	11%	14%	8%	25%	9%	0%	0%
7	OR 361; Culver-Metolius (ODOT 361)	20%	16%	14%	28%	8%	14%	0%	0%
8	US 20; Bend-Sisters (ODOT 17)	27%	8%	7%	9%	23%	17%	10%	0%

Baseline Conditions – Travel Demand

- Generally, little in the way of v/c congestion issues anticipated for any of these corridors by 2030
- Areas with most-significant expected congestion:
 - Sections of OR 126; Sisters Redmond, west of 27th Avenue will experience V/C ratios exceeding 0.90.
 - The highest V/C ratio is found on US 97; Redmond-Madras, where V/C is forecasted to be at capacity in downtown Terrebonne, approximately between NW 11th Street and C Avenue.

Baseline Conditions – Transit Service

- CET serves all 8 incorporated Cities with a variety of services:
 - Local Fixed-Route in Bend (7 routes), with complementary paratransit
 - Local general public dial-a-ride in the other 7 communities.
 - Service boundaries are the UGB in Culver, Madras, Metolius, Prineville, and Redmond
 - Service boundaries go outside the UGB in La Pine and Sisters due to local settlement patterns
 - Community Connector Shuttles connecting all 8 communities and Warm Springs – fixed schedule, some interim stops
 - Seasonal services: Mt. Bachelor Shuttle in the winter and Ride the River in the Summer

Baseline Conditions – TDM Programs

- Commute Options for Central Oregon is the primary TDM program provider. Partners with a variety of organizations, especially: BMPO, City of Bend, ODOT, CET, etc.
- Core programs of significance to COTOP:
 - Advocacy and Outreach
 - Regional administrator of Drive Less Connect (online rideshare/trip planner/savings estimator program)
 - Commute Options Partners (COPs) TDM program development and rewards program to participating businesses
 - Vanpool program – Promote vanpools to businesses and link them to private vanpool providers

Baseline Conditions – Financially-committed projects

- Baseline = current conditions plus financially-committed improvements
- No existing financial commitments to improving TDM or Transit Programs
- Financially-committed highway projects =
 - Segment 5, US 97 Bend to La Pine
 - 25 M of the Murphy Overcrossing project (complete overcrossing and complete Murphy to Brookswood
 - “Road diet” portion of the 1st and 97 project in La Pine is committed.
- Additional projects will be approved through Enhance It, but this will be outside the timeframe/scope of this project.

Transportation Options – Transportation Options Memo

- Transit & TDM Strategy Options
 - Factors influencing mode shift
 - Effectiveness
 - Costs (User and Provider)
- Potential Roadway Improvement Projects
 - Capacity improvement
 - Costs

Factors that Influence Transit and TDM

Strategy	Vanpool	Intercity Bus	Commuter Rail
Long Trip Distance	+++	++	++
Concentrated Employment	+++	+	++
Frequency	+	+++	++
Residential Density	+	++	++
Local Transit	+	+++	++
Bike/Ped Connectivity	+	+++	++
Park & Ride Stations	++	++	+++

Intercity Transit Effectiveness

Effectiveness	Estimated % of Trips Shifted	Characteristics of Effectiveness Level
High	6%-20%	<ul style="list-style-type: none">• High density of employment in CBD• Long distance to CBD• Expensive parking in CBD• Connections to local transit feeder routes• Bicycle and pedestrian access to transit and park and ride facilities to connect to transit• Transit-dependent and/or environmentally-conscious population• Reasonable cost relative to other options• Employer subsidy of fare costs• Ample and inexpensive parking at stations• High frequency of service during peak periods• High quality amenities

Intercity Transit Effectiveness

Effectiveness	Estimated % of Trips Shifted	Characteristics of Effectiveness Level
Medium	4%-5%	<ul style="list-style-type: none"> • Medium density of employment in CBD • Connections to local transit feeder routes • Inexpensive parking at stations • Frequent service during peak periods • Transit-dependent and/or environmentally-conscious population • Few employers subsidize fares • Low amenity service
Low	2%-3%	<ul style="list-style-type: none"> • Dispersed employment in CBD • Inconvenient connections to local transit feeder routes • Inexpensive, ample parking in CBD • Transit-independent population

Vanpool Effectiveness

Effectiveness	Estimated % of Trips Shifted	Characteristics of Effectiveness Level
High	10%-15%	<ul style="list-style-type: none"> • Commute distances more than 15 miles one-way • Employer offers information and encouragement, and a selection of the following types of incentives, where applicable: <ul style="list-style-type: none"> ○ Guaranteed ride home program ○ Priority vanpool parking ○ HOV lanes, where applicable ○ Non-cash incentives where employees are recognized or rewarded in the form of gift cards, for example, for vanpool participation ○ Financial incentives for first time vanpoolers (4-6 months) or on an ongoing basis ○ Market rate parking ○ Parking cash out policy

Vanpool Effectiveness

Effectiveness	Estimated % of Trips Shifted	Characteristics of Effectiveness Level
Medium	5%-10%	<ul style="list-style-type: none"> • Commute distances more than 15 miles one-way • Employer offers information and encouragement, and a selection of the following types of incentives, where applicable: <ul style="list-style-type: none"> ○ Guaranteed ride home program ○ Priority vanpool parking ○ HOV lanes, where applicable ○ Non-cash incentives where employees are recognized or rewarded in the form of gift cards, for example, for vanpool participation ○ Ridematching services
Low	<1%-5%	<ul style="list-style-type: none"> • Commute distances less than 15 miles one-way • Employer offers information and encouragement only

Commuter Rail Effectiveness

Effectiveness	Estimated % of Trips Shifted	Characteristics of Effectiveness Level
High	10%-25%	<ul style="list-style-type: none"> • High density of employment in CBD • Long distance to CBD • High frequency of service • Ample and inexpensive parking at stations • Connections to local transit feeder routes • Heavy traffic congestion on parallel routes • Expensive parking in CBD
Medium	5%-10%	<ul style="list-style-type: none"> • Moderate density of employment in CBD • Moderate distance to CBD • Parking at stations • Moderate congestion on parallel route
Low	1%-4%	<ul style="list-style-type: none"> • Low density of employment in CBD • Short distance to CBD • Few morning and evening trips • Little traffic congestion on parallel routes

Pricing Effectiveness

- Corridor-based techniques (i.e. Tolls) work when there are no parallel alternatives
- Region- or Statewide implementation more practical (i. e. VMT tax versus cordon or parking pricing)
- Travel tends to be more price sensitive if travelers have better options, including different routes, modes and destinations
- Marginal and visible pricing indicators (gas price, per trip tolls etc) result in more behavioral changes
- Higher value travel, such as business and commute travel, tend to be less price sensitive than lower value travel

Pricing Effectiveness

- Wealthy people tend to be less sensitive to pricing and more sensitive to service quality than lower-income people.
- Consumers tend to be more responsive to price changes they consider durable, such as fuel tax increases, compared with oil market fluctuations perceived as temporary
- Pricing impacts tend to increase over time. Short-run (first year) effects are typically a third of long-run (more than five year) effects

Summary of Strategy Effectiveness and Costs

Strategy	Range of Effectiveness			Costs	
	High	Medium	Low	Cost to Society	Mo. Cost to User
Intercity Bus	6%-20%	4%-5%	2%-3%	Medium	\$30-\$100
Vanpool	15%-25%	5%-15%	<1%-5%	Low	\$60 - \$100
Commuter Rail	10%-25%	5%-10%	1%-4%	High	\$90-\$190

Next Steps

Deliverable	Timeframe
Memo 3 – Strategy Package Development	December [†]
Report 3 – Revised Strategies and Cost & GHG Analysis	February*
Final Plan – Strategies, Costs, Benefits, Public Policy Analysis & Implementation	May*

[†] TAC email review

* TAC Meeting