## Some potential elements of a long-term transportation plan for Bend, Oregon

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With the assistance of Michael Sweeney, City of Boulder, Colorado, I have organized these potential elements into three groups:

**Sustainable Transportation System** – maintain existing infrastructure, a few new construction projects needed to complete the present transportation system, create walk/cycling/transit networks that are competitive with single occupant vehicle (SOV) travel. Enhance the ability to use multiple modes on a trip. Any new vehicle infrastructure should be managed with a bias to multi-occupant automobile (carpool, transit). Potentially toll excess capacity for SOV and reinvest revenue into transit.

**Manage demand** -- Transportation Demand Management including paid parking. Reinvest parking revenues into sustainable transportation options (pedestrian, cycling, transit)

**Community built form** consistent with minimizing need for travel – mixed use, efficient infrastructure use, density where easiest to serve

Michael suggests in the long-term determine how to address the transition from individually owned vehicles (and parked) to shared ownership (never parked) Transportation Network Companies and eventually autonomous vehicles. Some tools will not work going forward (e.g., parking-based tools). Avoid investments that will become stranded.

### Sustainable Transportation System

- Gas tax to fund road maintenance.
- Highway 97/20 reroute at the Cascade Village Shopping Center and surrounding commercial area in north Bend.
- A northbound parkway exit in the vicinity of Franklin and Greenwood.
- Maintain local parkway exits and entrances to facilitate local traffic. This should be a priority for the parkway over through traffic which is only 10% of present Parkway use.
- Complete the Empire extension to 27th street.
- Park & Ride facilities and bus connections/ bike rentals around the perimeter of Bend and Redmond.
- Bike lanes facilities on all arterial and collector roads. Bike facilities should be designed to provide comfortable riding environment for all users (age 8 to 80)
- Sidewalks on all streets
- Crosswalks treatments at all intersections often crossed by pedestrians or in a trail plan. Treatments scaled to conditions (signed, rectangular rapid flash beacon, traffic signal)
- Special bicycle and walking corridors that are free of vehicle traffic or have very low vehicle traffic. Bike boulevards
- Free or low-cost public transit on congested routes during periods of congestion. High frequency to be competitive. Attract choice ride not just transit dependent.
- Traffic prioritization signals for buses, shuttles, and maybe car pool if possible
- Dedicated bus and car pool lanes on arterials during congested hours.
- Faster bus or car pool connections, including from Redmond, Sisters, La Pine and Prineville.
- Shared taxi
- Rental bicycle and electric bicycle at strategic locations (subsidize if needed)
- A bus design that can accommodate more bicycles. Linked trips
- Provide a tourist shuttle from hotels to downtown and the Old Mill District

- Complete a pedestrian-only River Trail from Sunriver to Tumalo State Park. Bicycle use has become too heavy in the vicinity of Bend for shared trails and an alternate trail system for bikes is needed in the vicinity of the Deschutes River. Consider impacts to remaining less disturbed fragments of wildlife habitat in trail location and for this reason do not build a second bridge south of Bend.
- A tourist bus, trolley, or ski lift connection between downtown and the Old Mill District in Bend.
- A commuter train between La Pine and Madras through Bend and Redmond. Admittedly expensive, but in the long-term may be worth it as used in many other countries.
- Passenger rail service between Chemult and Portland via The Dalles and through La Pine, Bend, Redmond and Madras. Admittedly expensive, but in the long-term may be worth it as used in many other countries.

**Manage demand**

- Bus pass programs. Mandate that employers with more than ___? employees provide them if a convenient bus connection is available?
- Set maximum traffic volumes desired for each road segment (e.g., block or group of blocks) and charge using dynamic pricing during periods when volumes are exceeding. London, Great Britain is presently using this system. Start with the concept of managed and paid parking. Potentially look at creating parking/access districts (Downtown to start?). Exempt individual property from providing parking on site. Manage/provide parking on a district basis.
- Higher cost parking when parking is full (e.g., >95% full, dynamic pricing)
- A second parking garage for downtown
- Stop publicly-financed tourist promotion efforts during the summer and other high visitation periods when tourist visits contribute significantly to traffic congestion.

**Community built form**

- Connect mixed-use commercial and higher-density residential hubs about 2 miles apart with public transportation and roads. Establish a parking garage at each hub.
- A city-center multi-modal transit hub for rail, bus, bikes, etc. on 1st - 2nd Street NE, preferably between Greenwood and Franklin. This site would include a staffed station with ticket office, seating, food and restrooms, a parking garage, an exit off the Parkway northbound, and a street underpass beneath the railroad with attractive pedestrian sidewalks and bike lanes.
- Reduce required parking spaces per resident for new higher density residential construction
- In some areas where parking is limited, restrict parking to local residents with a permit.
- More local renewable electricity production for electric vehicles