Community Planning Workshop

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To	**Ashland Downtown Parking Advisory Committee**
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SUBJECT	**DOWNTOWN TROLLEY WHITE PAPER**

Introduction

Community Planning Workshop is working with the City of Ashland to conduct a downtown parking and multimodal circulation study. The study is intended to evaluate the effectiveness of existing downtown parking management, truck loading zones, and travel demand management strategies to improve the overall accessibility of downtown for visitor, employees, business owners and residents.

As requested by the Downtown Parking and Multi Modal Circulation Advisory Committee (PAC), the following memorandum details research on select rubber tired trolley systems around the country. Most trolley or streetcar systems CPW identified operate on tracks or via overhead electric lines, which made identifying comparable systems challenging. While CPW identified several examples of rubber-tired systems, many of the cities are not "comparable" to Ashland (e.g., they do not have a state university or have a much larger population). Despite these limitations, CPW evaluated four rubber tire systems. Additionally, CPW prepared preliminary cost and ridership estimates to determine if it is worthwhile for Ashland to complete a full feasibility study.

Background

Ashland has been discussing options for a circulator shuttle system for at least 15 years. The Downtown Plan (2001), the Community Economic Vision Implementation Plan (2007), and the recently updated Transportation System Plan (TSP, 2013), all highlight the desire to complete a feasibility study evaluating a downtown circulator shuttle. The 2013 TSP outlined a potential fixed route, and estimated capital (i.e. start up) costs ranging between $2.8 and $4.5 million.

With an estimated 350,000 visitors annually, Ashland could be well served by a circulator shuttle. As conceived in the TSP, the shuttle would serve downtown in combination with hotels, some of the residential areas and Southern Oregon University. A key objective of the system would be to provide access options other than the automobile for visitors, residents and employees, thereby freeing up parking spaces and reducing congestion. As with other forms of transit, a circulator shuttle must be convenient, reliable and cost effective in order to encourage extensive use. The following case studies outline how other cities across the country have implemented rubber tired trolleys, and the section after that highlights questions for Ashland to consider when/if they choose to implement a circulator trolley.

CASE STUDIES

To better understand the costs, route frequency, and ridership of rubber tired trolleys, CPW reviewed rubber wheel trolley systems in select cities. The four cities are Coral Gables, Florida; West Palm Beach, Florida; Scottsdale, Arizona; and Roanoke, Virginia. Details of capital construction financing, operational funding, and governance structure can aid the discussion of the applicability of a rubber tired trolley in Ashland. We concede these cities have little in common with Ashland, but CPW did not identify any communities with rubber wheel trolley systems that could be considered true comparators.

Coral Gables, Florida

With an estimated 46,780 residents in 2010, Coral Gables is home to the University of Miami and located 4 miles from the Miami Airport. In addition to the home of the Baptist Hospital of Miami, which is the second largest employer, Coral Gables hosts close to 10 offices of major American companies. It currently serves approximately 4,000 riders a day (equating to a million riders a year) on a fare-free service. The trolley travels a straightaway length of 5.5 miles (11 miles round trip), with stops every one to two blocks in the Central Business District, and two to three blocks outside the Central Business District. Collectively there are four to six trolleys that sit 25 riders, with room for another 15 standing, at a frequency of 10 to 15 minutes.[1]

Capital investment for the system was approximately $2.5 million, which came from county and state grants. Operational funding comes from a percentage of the county sales tax, and totals approximately $1.3 million dollars annually. The system is operated privately, by Florida Limousine Services, the largest private taxi and operator service in southern Florida. The trolley operates longer hours during monthly art gallery shows and has been proven to both reduce auto trips to downtown by 20% and reduce the need for 750 parking spaces.

West Palm Beach, Florida

West Palm Beach is the county seat of Palm Beach County, and also the largest city in the county, with 102,000 residents. Their downtown area has a population of 11,000 residents, but sees an average daytime population of 140,000 people. Started in May of 2012, their Downtown Circulator Route is a free and sees a monthly ridership of 8,400 (approximately 280 riders per day). There are between 10 and 15 stops on the two routes, which have a headway of 10-12 minutes. Operating seven days a week, the trolley serves both daytime visitors and employees, as it hosts a number of large employers in the media and aeronautical industry.[2]

The trolleys are owned and operated privately by Molly's Trolleys for a fee of $65 an hour. Molly's Trolley primarily runs a private charter service with their trolleys, for weddings and corporate events. Based on the hourly rate, the trolley service costs $598,260 annually, which accounts for two vehicles, one for each route. This is paid through two sources: a Federal Transit Authority (FTA) Job Access Reverse Commute (JARC) grant, and a 50% local match

[1] http://www.coralgables.com/index.aspx?page=325
[2] http://www.sfrta.fl.gov/docs/Grants/City_of_West_Palm_Beach-JARC.pdf

provided by the City of West Palm Beach Community Redevelopment Agency. The service conducts user rider studies, and ascertained that 50% of riders have an annual income of less than $20,000. Serving both visitors and low-income residents certainly helps support the subsidizing of the system, as well as keeping it fare free.

Scottsdale, Arizona

Scottsdale is a suburb of the Phoenix Metropolitan Area, with a population of about 225,000 residents living in the city. Scottsdale's major economic draw is its tourism industry, attracting over 7.5 million visitors every year with its high density of resort spas, high-end shopping, and strong artistic community. The City operates three year-round and three seasonal routes to meet the needs of both residents and visitors. One year-round trolley operates just around the downtown area, while two Neighborhood Trolleys are dedicated to offering transportation for local residents, stopping at schools, parks, medical facilities, and other facilities. Scottsdale's seasonal routes operate during the winter, their peak visitor season. The Hospitality Trolley offers services for guests staying at various local resorts while the Spring Training Trolley offers services specifically for visitors in the area for baseball games.

Scottsdale's trolley program sees a ridership of about 600,000 boardings per year. The program is operated through a contract with a local private vendor, Dunn Transportation, and the contract is managed by the City's Transportation Department. The program costs $2.8 to $3.3 million per year, which includes the contract, fuel, personnel, and depreciation costs. All transit programs are funded by the Transportation Special Revenue Fund, which receives revenue from the City's 0.2% transportation sales tax and state lottery funds. Additionally, all resorts served by the Hospitality Trolley contribute funds to its operations, covering about 50% of its operating costs.[3]

Several issues have arisen as a result of the contracting process. City staff have not effectively managed the terms of the contract, with several instances of over- and under-payments and difficulty maintaining communication with the company's management. The vendor has not efficiently tracked data, often misreporting ridership numbers to the City. Additionally, City staff have found it difficult to manage the quality of trolley service, specifically regarding timeliness.

Roanoke, Virginia

Roanoke serves as the major commercial hub of southwestern Virginia, and has a population of about 95,000 residents. Originally an industrial town, its economy has seen a growth of its healthcare and commercial sector. The city offers a number of cultural attraction as well as serves as a gateway to the Blue Ridge Parkway, which sees over 15 million visitors every year. Roanoke's Starline Trolley is a free service offered to downtown visitors and employees offered by the city's Public Transit Agency. The trolley operates on a single 1.5 mile fixed route with 13 stops throughout the downtown area. The service runs Monday to Friday, with stops every 10 to 15 minutes, depending on the time of the day.

[3] http://www.experiencescottsdale.com/plan-your-trip/transportation/the-scottsdale-trolley/

The service is operated by Roanoke's Public Transit Agency, which manages all public transportation in the area. Not including the initial purchase of the vehicles, the program costs about $100,000 per year. It is partially funded by Carilion Roanoke Memorial Hospital, whose employees and patrons utilize the service. The other half is funded by Downtown Roanoke Incorporated and the City of Roanoke, with $26,000 provided from tax revenues.[4]

The trolley launched in 2008, and initially was more successful then expected, averaging about 500 boardings per day. However, more recently, the trolley saw a 26 percent drop in ridership between 2010 and 2012. To address this, the City evaluated their system and made changes to improve the customer service experience. They reduced the frequency of stops allowing the trolley to offer more reliability of service. Upon making these changes, they saw an increase of about 100 more riders every day, a 25 percent increase.

Considerations For Ashland

While the trolley programs implemented in each of the cities are not directly applicable to Ashland's concept, they do highlight certain considerations the PAC will need to take in deciding whether or not to pursue a trolley system.

Operations

What is the target population(s)? How do we meet their needs? As a first step, the city will need to determine which population(s) the trolley is intended to serve, i.e. visitors, college students, residents, etc. This will influence discussions about routes, frequency, and possible pricing as well as any other infrastructure needs that may arise.

Where will the route run? Ashland's Transportation System Plan outlines a possible route along Siskiyou Blvd., running through downtown Ashland on the north end, and ending along Ashland Street on the south end. This route may not meet the needs of the target population(s). If the program is designed to consider the needs of Ashland residents, the trolley will likely need to make several stops in residential neighborhoods. If serving the needs of visitors, the route will need to provide transportation to local hotels.

How often will the route run? The frequency of services will have a major effect on the operating costs for the program. The Committee will need to consider how many days of the week the service will run, hours of operation, frequency of service, and if the trolley service will be offered year round.

[4] http://www.valleymetro.com/trolley.htm

Finances

How will the initial capital costs for vehicles and start-up be funded? The development of a new trolley system will require the purchase of multiple vehicles in order to run a reliable service. The case studies above demonstrate a variety of strategies to acquire funding for a trolley service including tax revenue, federal or state grants, and special funds.

What kind of vehicle will be used? This decision is influenced by the discussion of cost and target population. Some cities preferred the use of trolleys that run on tracks as opposed to rubber tires, as a strategy to attract users and providing a unique experience. However, these vehicles tend to cost over $200,000. A bus with a 'trolley style' would cost about $100,000 less, though it may be less of an 'experience' for riders. If the City should choose to target services for residents or employees, there would be less of a need to focus on developing an 'experience' for users.

Is there a cost for riding the trolley? The PAC should consider the consequences of pricing or not pricing trolley service, especially regarding possible effects on reducing the demand for parking in the downtown area. Implementing a fee for trolley service may discourage ridership, though it could generate revenue for maintenance of the service. A key consideration is whether the current parking situation in downtown provides enough incentive to encourage people to ride a trolley. If not, then the trolley will need to provide a unique experience, or convenient access to key locations.

How will operating costs be funded? Operating costs for a trolley service include personnel, maintenance, and fuel costs, as well as marketing and promotional efforts. Most other cities utilize public funds for program operations, often a mix of local, state, and federal revenue. Some services have developed contracts with companies who benefit from the development of a trolley service (e.g. hotels, major employers on the service route).

Governance

Who will manage the program? The PAC, in combination with Ashland City Staff, and Rogue Valley Transportation District, need to consider the best system for governing the trolley program. The service could be managed by a public agency, Rogue Valley Transportation District (who manages the transit services in Ashland), or the City could choose to contract service management out to a private agency.

Trolley System Preliminary Cost and Revenue Estimates

As a preliminary step, CPW prepared order of magnitude cost and ridership estimates using information gathered from the Policy Options Survey and case study research. A number of assumptions were required to inform the estimates, and it should be understood these are *only back of the envelope estimates.* **This information is not intended to serve as a feasibility study for a rubber tired trolley.**

The development of a rubber tired trolley system in Ashland requires both capital funding and operating funding. The capital funding is required to purchase the vehicles and start up the program, while the operational funding pays for annual labor, maintenance, marketing, etc. While other sources are possible, CPW assumed the trolleys would be purchased through bond measures or grants, and therefore those sources of funds are not discussed in this section. Operating costs were assumed to be between $1 million and $1.2 million, based on case study research. While Roanoke's system is closer to the estimated ridership for Ashland, the Coral Gables system is a better representative of the route length, operating hours, and in our estimates, operating costs.

For a trolley system to be effective, it must provide frequent and reliable service. In areas with traffic and multiple destinations, this probably requires multiple trolley vehicles. With total operating costs in the range of $1 million, CPW developed scenarios to generate equal amounts of revenue solely from rider fares. The targeted riders obviously affect the route length, so both a route for visitors/employees, and a route for residents were created. While the case studies indicate total residents and visitors, the information was not detailed enough for CPW to determine the resident/visitor ridership split. As such, we developed multiple estimates for the different user groups in estimating ridership.

Due to Ashland's street grid, a resident shuttle circulating through all of the neighborhoods would be more time consuming, longer, and more expensive than a trolley designed for visitors and employees. With a route only for residents, it would also require more frequent ridership (for example, once a week by ¾ of the residents) for revenues to cover costs. This is further discussed below.

The Ashland street grid *does* cater to developing a trolley for visitors and employees. A system that ran from Exit 19 to Exit 14 on I-5 could serve the majority of the hotels, as well as accommodate the building of satellite lots for employees. Shown below in Figure 1, the route would have a round trip distance of 11 miles and could have up to 11 stops (approximately every half mile). This route differs from the route described in the TSP. While the previously outlined route traveled to the south side of town, it did not include visits to any of the hotels or destinations north of town. Subsequently, CPW chose to extend the route.

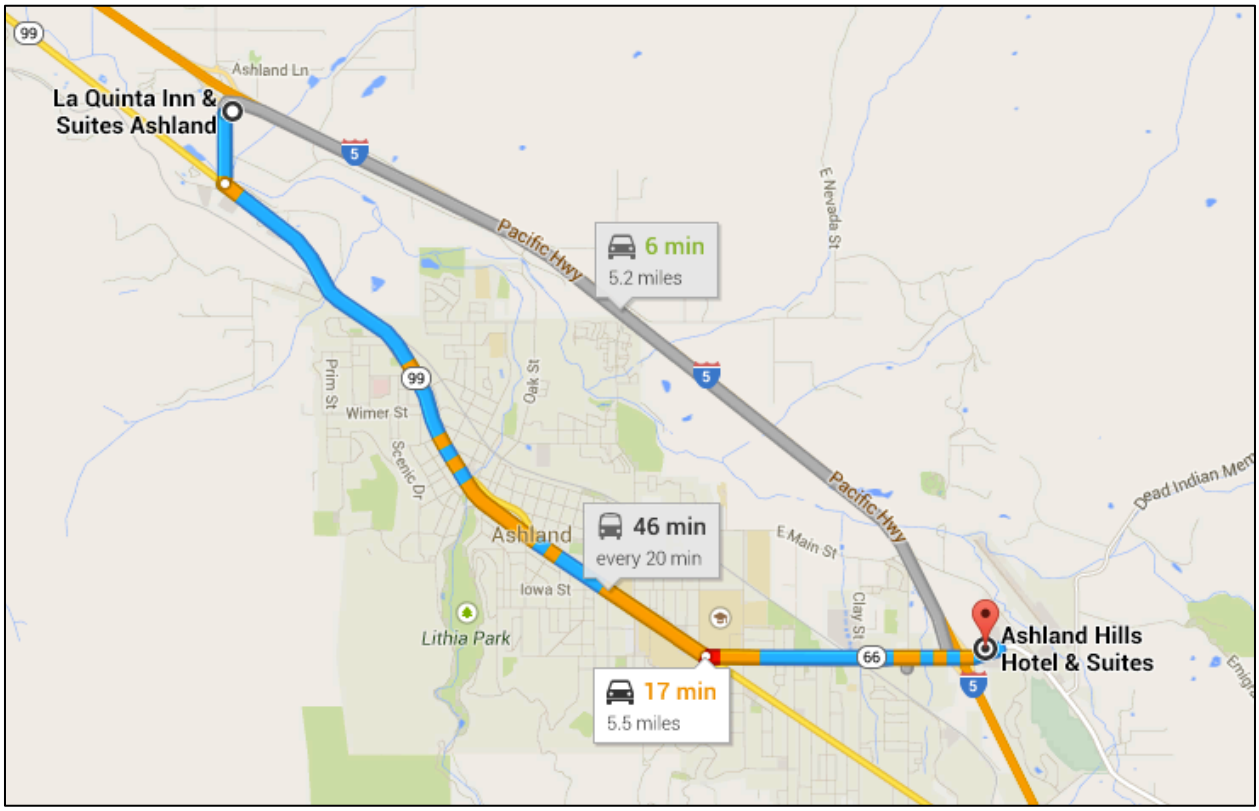

Figure 1. Suggested Trolley Route (Source: Google Maps)

With a much larger base ridership, fares could more easily cover costs with a trolley system designed for visitors and employees.

The Policy Options survey asked residents, employees and some visitors how much they would pay to ride the trolley. The average answer $0.75, for the purpose of this exercise, CPW used $1.00 (or $2 for a round trip). With a combined employee and visitor population of approximately 353,000 people, only half that many people would need to ride the trolley 3 days a year to generate revenues of $1 million dollars. Similarly, 75% of visitors/employees would need to ride the trolley just twice a year (so two trips in 365 days) to generate the same amount of revenue, Table 1. Put another way, the trolley would require 500,000 rides a year to generate enough revenue.

More than 80% of employees and resident visitors indicated they would use the trolley, so while these are estimates, they are made with informed judgment. While the survey results suggest a high potential ridership, the details of the system would have a big impact on actual ridership. We expect the percentage of resident visitors to downtown would be somewhat lower than the survey results suggest because the system would not provide service to most residential areas in Ashland. Therefore, a mode shift (e.g., from auto to trolley) would not create the type of convenience that would be conducive to ridership for residents.

Table 1. Trolley Revenue Estimates.

Trolley Revenue Estimates	
Approximate Ashland visitors	350,000
Approximate Ashland employees	2,839
Fare per round trip	$2.00
50% Ridership taking 3 trips per year	$1,050,000
75% ridership taking 2 trips per year	$1,050,000

Sources: Ashland Chamber of Commerce, Oregon QCEW, CPW Policy Options Survey

These revenues do not include the addition of advertising, which many trolley systems across the country utilize. Also not discussed is the management structure for the proposed trolley. Systems across the US vary from management by non-profits to private contracts overseen by cities directly. Moving forward, the committee should discuss how it proposes to manage the trolley, in conjunction with city and Rogue Valley Transportation District (RVTD) staff.

Based on our ***back of the envelope estimates***, a trolley system designed for visitors and employees could be a feasible option to reduce congestion and parking demand for downtown Ashland. If the committee decides a trolley is a viable option for Ashland's transportation issues, a complete feasibility study and/or market analysis should be conducted as part of recommendations to city council.

Conclusion

The Downtown Parking and Multi-Modal Circulation Committee prioritized the discussion of a circulator trolley for moving forward with recommendations to improve transportation in downtown Ashland. As such, four case studies of rubber tired trolley systems from around the country are presented within this memorandum. Also included is a series of questions the committee should answer if a trolley system is to be implemented, as well as CPW's estimates of ridership and fare revenues.