

# **If You Build It, Will They Come? Lessons Learned in Examining the Feasibility of a Visitor Shuttle**

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## **ABSTRACT**

Cities with significant tourism must constantly find new ways to attract new visitors to their cities, underscored by the current recession. In this paper, KOA has provided a summary of the City of Palm Springs Feasibility Study of Airport – Downtown Shuttle Service effort and findings. The City of Palm Springs, its hoteliers, and its tourism industry were interested in the potential implementation of a Shuttle system that would operate between hotels, the downtown, and the International Airport. KOA assisted the City, with grant funding and project oversight by the Southern California Association of Governments (SCAG), in developing the Feasibility Study. The SCAG Compass Blueprint program supports measures to reduce auto trips and create better linkages between transportation and land use. Open house meetings with area stakeholders and hotel property owners, and hotel guests and hoteliers surveys, were part of the study data collection effort. Geographic Information System (GIS) software was used to map clusters of vacation rental and hotel units and the related survey data. Implementation concepts, including route scenarios, schedules, and costs, were presented to stakeholders and refined. The feasibility review focused on the downtown core area and other potentially supporting clusters of hotel properties and vacation rental units. The propensity of visitors to use a Shuttle for typical daily trips was considered, based on survey data. For the final decision factors, the future development density needed to support a Shuttle was weighed against the ridership potential and fixed cost of the service. The question then became, "How much more development must the City create to support a shuttle?"

## **INTRODUCTION**

*What enabled this study to take place?*

The City of Palm Spring Feasibility Study of Airport-Downtown Shuttle Service was undertaken under the SCAG Compass Blueprint program, which emphasizes principles for mobility, livability, prosperity, and sustainability. The Blueprint's promotion of transportation/land use linkages is a local fulfillment of the State Regional Blueprint Planning Program mandated under Senate Bill (SB) 375, which is intended to engage regional and local decision-makers with community stakeholders to enable growth and development while reducing sprawl.<sup>1</sup>

This study evaluated the feasibility of operating a new Shuttle service between area hotels and the Palm Spring International Airport with the goals of:

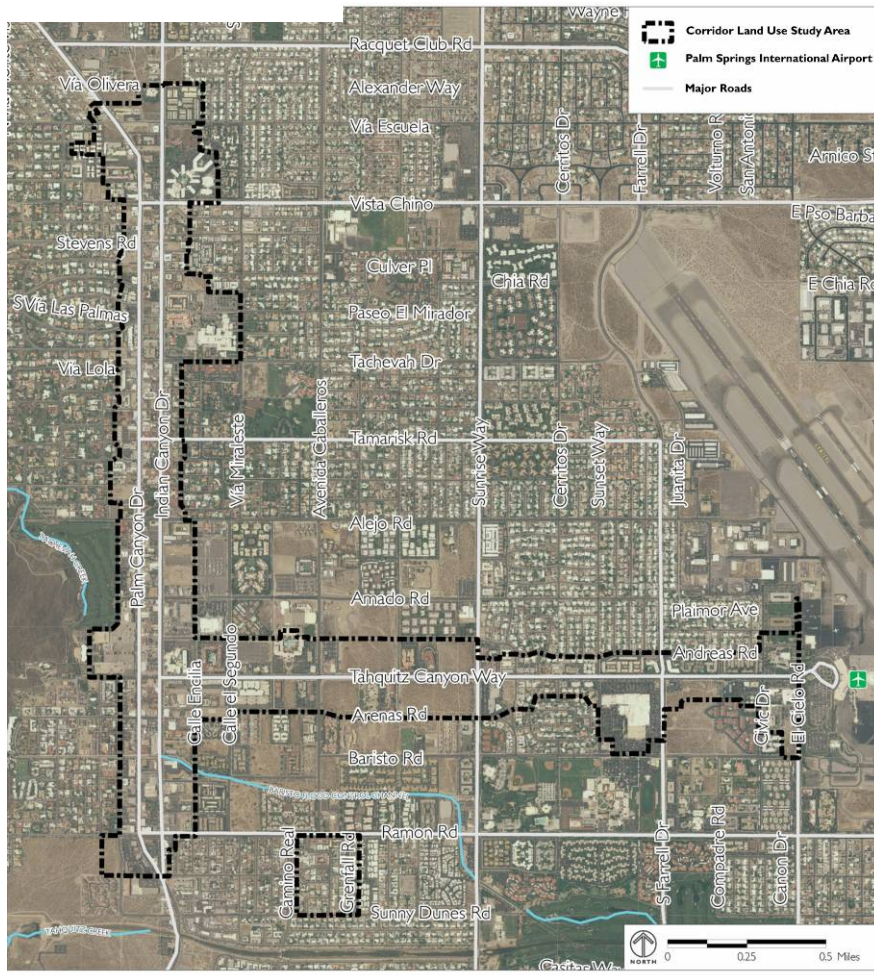
- (1) Defining primary connections that could link area hotels with the airport;
- (2) Defining additional connections that could link area hotels with cultural and tourist destinations;
- (3) Integrating the connections with the Agua Caliente Tribe development;
- (4) Reducing the number of vehicle miles traveled (VMT).

*How did the study relate land use to transportation?*

The study had an additional larger goal of conceptualizing future development incentives that could potentially reduce parking requirements.

The study area was defined through coordination with the City of Palm Springs to define geographic constraints for potential Shuttle service in the larger downtown area. The study area extents were defined by Vista Chino on the north, Cielo Road and the Palm Springs Airport on the east, Ramon Road and Warm Springs Road on the south, and the San Jacinto Mountains on the west. Major arterial roadways within the study area are: Tahquitz Canyon Way (an east-west roadway that connects the study area to the airport), and Palm Canyon Drive and Indian Canyon Drive (both north-south roadways). Figure 1 illustrates the general study area and the specific land use study area (within the dotted line).

**Figure 1: Study Area**



The Shuttle feasibility analysis considered three scenarios, each with a different connection scheme for the study area:

- **Scenario A** - The Shuttle would serve the survey participant hotels;
- **Scenario B** - The Shuttle would serve the downtown core and major attractions;
- **Scenario C** - Two routes would be established to serve the downtown area and the airport-hotel trips. The three Shuttle scenarios are illustrated in Figure 2.

Based on the analysis, recommendations were developed for potential implementation of the Shuttle system. Details of the data collected and analyzed for the study are discussed within the next section.

## DATA COLLECTION

*What information did we obtain to conduct the Study?*

The data collection process included stakeholder outreach, hotel guest and hotel manager surveys, compilation of land use data, and identification of potential future development projects. This information provided the foundation for the analysis of Shuttle feasibility within the study area.

Stakeholder outreach and the survey effort were integral components to the Shuttle service alternatives analysis. The stakeholder participants included SunLine Transit, the Agua Caliente Indian Tribe, large and small hotel operators, local tourism-related and cultural institutions (including museums), and neighborhood associations. The outreach included the initial introduction of the stakeholders to the Study and an open house format that detailed: 1) applied study methodology, and 2) service options being considered. The stakeholders provided recommended refinements to the options.

The Shuttle surveys were disseminated to two groups – hotel guests and hotel managers. The hotel guest surveys were distributed at participating hotels asking guests about their current visit (typical daily trip patterns, rental car usage) and their desire to utilize a potential Shuttle. The hotel manager surveys included questions regarding existing hotel-operated shuttle service and willingness to contribute to a future Shuttle program.

The hotel guest survey was conducted during a three-week period. Of the 1,200 surveys distributed to 14 hotel operators, a total of 104 surveys (nine percent) were completed and returned by eight (57 percent) of the hotels. As for the hotel manager surveys, of the 14 hotels, seven (50 percent) managers participated in the survey.

*What were some of the things we asked the targeted survey groups?*

A sample of the hotel guest survey questions for the study included:

- How are you currently getting around town?
- What major locations/attractions in Palm Springs will you visit during your trip?
- If there was a fixed route shuttle (serving multiple stops on a schedule), would you be willing to use it?

The survey responses for the type of mode of travel showed a high propensity of personal or rental vehicles along with walking to destinations (approximately 61 percent). The demand for taxi cabs and public transit were negligible (approximately nine percent). There were no visitors that indicated they used hotel shuttles during their stay.

As for where the visitors were going, there was an equal distribution across the various area attractions (Aerial Tramway, Art Museum, Thursday Village Fest, Spa Casino,

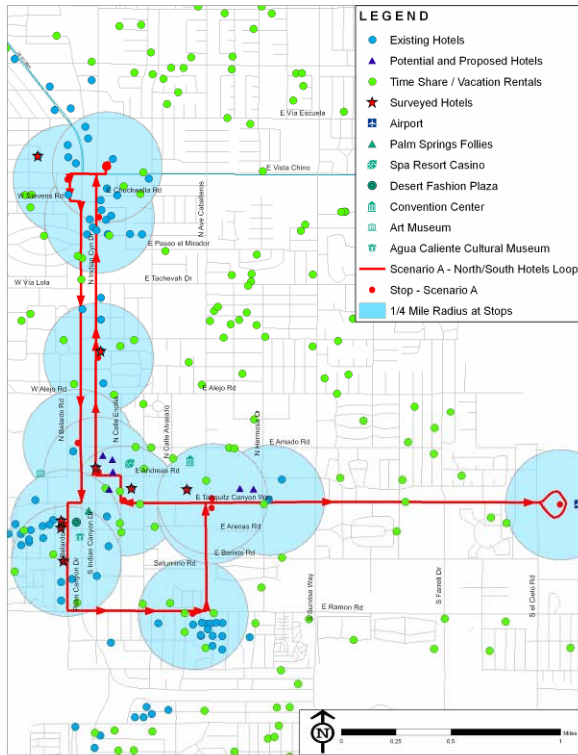
recreation areas, Other). The highest response by visitors was for the other destination category (approximately 15 percent). The Art Museum and Spa Casino had an equal proportion of visitors (approximately 14 percent); followed by the Aerial Tramway and recreation areas (approximately 13 percent); and then Thursday Village Fest with 11 percent. The remaining attractions visited were less than 10 percent.

In terms of their willingness to use a fixed-route Shuttle, the majority of visitors would likely use the Shuttle service to hotels, shops, and leisure only (approximately 43 percent). This was followed by visitors who would likely use the Shuttle to all their destinations (approximately 38 percent). The remaining guests would likely utilize the Shuttle from the airport to their hotel (approximately 19 percent).

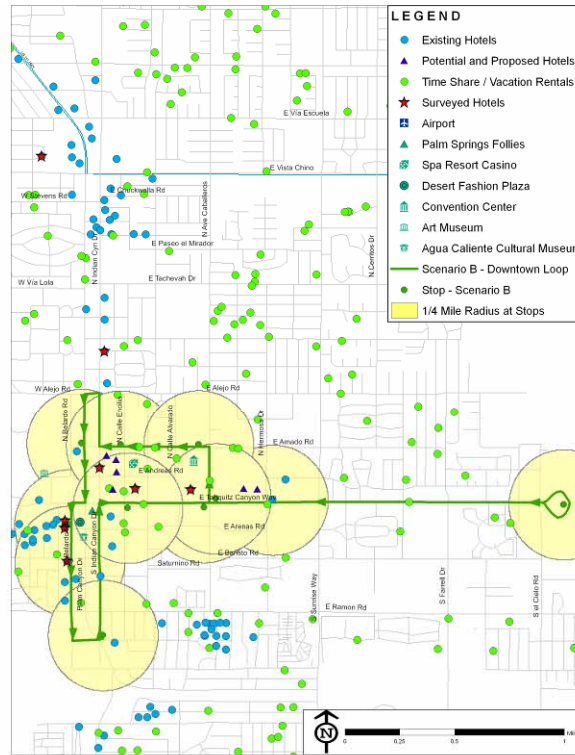
*What kind of geographic coverage was provided by the three route alternatives?*

The survey input was used along with available socioeconomic and tax databases for the land use analysis related to existing conditions and for future area development, and the route alternative analysis. This included data from the City of Palm Springs Department of Planning Services database, the local Transit Occupancy Tax database. From this initial analysis and collection of data, KOA developed a GIS database data mapping and route/stop location analysis for the three Shuttle route options.

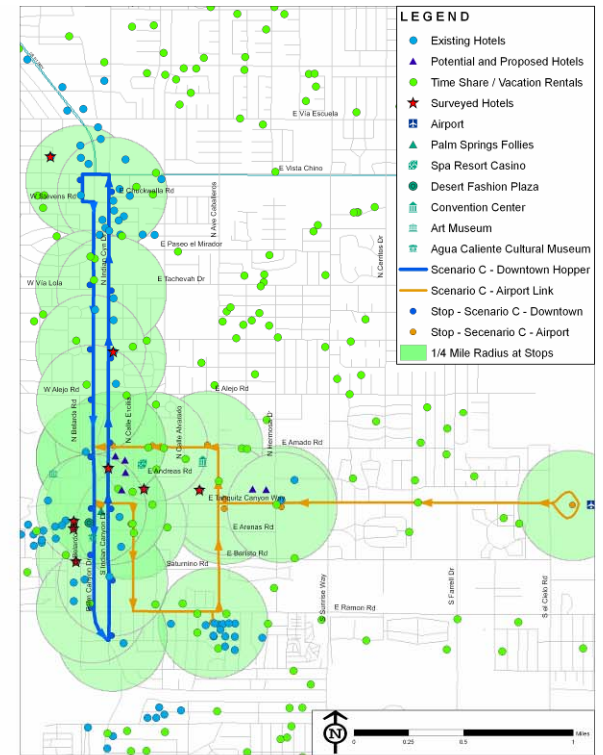
**Figure 2: Shuttle Route Alternatives**



Conceptual Route and Stop Locations For Scenario A



Conceptual Route and Stop Locations For Scenario B



Conceptual Route and Stop Locations For Scenario C

## SHUTTLE FEASIBILITY ANALYSIS

*Where did we take the analysis, after mapping out the data?*

To determine the feasibility of operating a Shuttle in the study area, analysis of the identified route alternatives analysis were undertaken, in regards to the compiled land use and survey data. This involved a comprehensive review and examination of factors associated with costs, operations, and implementation of the Shuttle. .

GIS was an integral tool utilized during the land use analysis. Routing alternatives were developed in relation to the clustering of hotels, vacation rentals, commercial, entertainment, and tourist attractions. Analysis of the mapped “views” of each route provided for fine-tuning of the Shuttle routes and quantified operations plans.

Based on the responses from the surveys from both guests and hotel managers, and based on ridership propensity determined from this data and the land use analysis, the route alternatives were analyzed to develop schedules, ridership estimates, and revenue hour estimates. These service features were reviewed for feasibility and potential implementation in association with existing transportation options (vehicular, public transit, buses, other shuttle services), consideration of similar systems and characteristics of shuttle services within the United States, airport connections, visitor expectations per the hotel guest survey results, supportive relationship with development which may include justification for reducing parking requirements, service performance goals (farebox recovery, subsidy per passenger, and passengers per vehicle hour), funding (state, federal, private development), and implementation process (design, scheduling, and branding).

*How will the Shuttle break even?*

The farebox recovery ratio and its relationship to land use/density was an important component of the analysis. Farebox recovery is a crucial element when determining Shuttle feasibility, as it represents the collected fares as a proportion of operational costs. For transit operators receiving State of California Transportation Development Act (TDA) funds, the operator must maintain a farebox recovery ratio of at least 10 percent.<sup>2</sup> The regional system farebox recovery average for operators in the area is approximately 18 percent . These benchmarks were used to gauge the results of the feasibility analysis efforts. A high trip frequency was assumed to be necessary, to make the Shuttle a viable Airport-to-downtown and downtown-to-attractions trip option for travelers, as the service would be replacing many existing on-demand hotel shuttle trips.

*Would near-term planned development densities support a Shuttle?*

The development densities necessary to support the Shuttle directly relate to the fares received, operational costs for all revenue hours, and the resulting farebox recovery percentage. The following was found from the analysis of each of the Shuttle alternatives:

- Scenario A could operate above the 10 percent farebox recovery goal with near-term hotel unit development,.
- Scenarios B and C would not reach the 10 percent farebox ratio goal, without large increases in density of near-term future hotel unit development that would be on the order of a 15 percent to 70 percent increase over planned levels.

To reach the 18 percent that local transit operators are averaging, all three scenarios would require large increases in hotel unit density, equating to a 3,000 to 12,000 unit increase over the expected near-term future conditions.

## **CONCLUSIONS**

The Shuttle Feasibility study was conducted to determine if a Shuttle system could be implemented in the City of Palm Springs with operations between hotels, downtown attractions, and the airport.

The analysis determined that the existing land uses within the study area do not support the Shuttle service envisioned for the area. As a suburban locale with a denser but limited Downtown core, there is not enough density that would generate enough ridership to sustain the system costs and operations.

If the Shuttle service were to be implemented with current development densities, the project farebox recovery goal of 10 percent might not be met. Future development would have to grow at an excessive pace, once economic conditions return to a growth phase, for the Shuttle to make an adequate financial return at the high frequencies required for reliable service.

Additionally, the service would need to provide a competitive advantage in terms of not only high frequencies but in other service aspects such as convenient service stop locations, as it would be competing with personal and rental vehicles, other hotel shuttles, taxis, and public transit in both cost and trip time. Seasonal flexibility and efficient connections would be important considerations for the operator.

## REFERENCES

<sup>1</sup> SB 375 [will add footnote reference]

<sup>2</sup> California Department of Transportation, "Transportation Development Act," <http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>

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