TECHNICAL MEMORANDUM

To: James Burr, Transportation Manager, City of Santa Cruz

From: Teifion Rice-Evans, Economic & Planning Systems, Inc. (EPS)

Subject: Review of City of Santa Cruz Financial Parking Model

Date: June 15, 2018

On December 6, 2016, the Santa Cruz City Council directed staff to develop and recommend a parking rate strategy that would support a new parking supply project. The City of Santa Cruz developed a financial model to forecast the expected changes in District revenues and costs associated with a number of proposed changes in parking funding mechanisms, rates, and investments. In particular, the City's financial model provides a planning-level forecast of the cumulative effects of: (1) increases in meter, garage/ surface lot, and parking permits rates/ charges; (2) the phase-out of deficiency fees; (3) annual investment in a Transportation Demand Management (TDM) program; (4) the development of a new parking garage; and, (5) cost inflation on existing operations.

The financial model represents a 5-year, nominal dollar, planning-level forecast that focusses on the incremental or marginal revenue and cost increases to the Downtown Parking District. The assumptions included in the model are best estimates given current Parking District financial and other information, proposed/ expected changes in the use of lots, and available literature on the effects of parking pricing changes and elasticity of demand. They also include the available cost estimates for the parking garage and the City's Financial Department's estimates of bond issuance related costs, interest rates, and associated annual debt service.

The purpose of the financial model is to provide policymakers with an indication of the ability of the proposed increases in parking pricing to cover the range of actions under consideration that would reduce revenues and/or increase costs. Actual revenues and costs will vary from those in the model based on a range of uncertain factors, including cost inflation, individual behavior, and actual garage construction costs, among others.

The City of Santa Cruz requested that Economic & Planning Systems, Inc. (EPS) review the City's financial model. The purpose of the review was to support City staff in: (1) providing accurate calculations, (2) determining how best to model uncertainties, such as responses to

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parking pricing changes, (3) providing a clear picture of revenue and cost effects of different changes, and, (4) considering the overall implications of the model.

Model Review Findings and Observations

The current version of the City's financial model incorporates EPS input and collaborative discussions between City staff and EPS. It represents a robust planning-level analysis of the proposed and expected changes in Parking District revenue and costs over the next five/six years. The sections below summarize the model outcomes and describe key modelling assumptions and observations.

Model Findings

Table 1 summarizes the outputs from the financial model. Key findings include:

- **Increased Revenues**. New Revenues from increases in the price of permits, meters, and lots and garages are estimated to provide a total of about $3.6 million annually in new revenues to the Parking District in nominal dollar terms by Year 4.

- **Existing Cost Inflation**. After expected inflation in existing Parking District costs are factored in (as well as the existing funding balance), the parking pricing increases are expected to results in about $3.4 million in new available parking revenues by Year 4/5. Because the parking rates will be flat in nominal dollar terms (until a future formal increase), but costs will increase with inflation, the net revenues available will decrease gradually over time.

- **TDM Costs and Deficiency Fee Phase-Out.** TDM program costs at $300,000 each year (and inflating) along with the phase-out of the $890,000 in annual deficiency fees over time (the 20 percent per year, five-year phase out option is shown here), reduces the net, potentially available revenues to $2.2 million in Year 5 in nominal dollars.

- **New Garage Costs**. The City's estimate of annual debt service for a new 600-space garage is about $2.9 million each year. The bond issuance for garage construction is assumed to occur at the start of Year 2 with the garage open and in operation at the start of Year 4. At the proposed permit and hourly parking rates, the new parking garage is expected to generate net revenues of about $1.0 million, after taking account of operation costs. As a result, the net annual investment required in the new parking garage is estimated at about $1.9 million in Year 5.

- **Revenue/ Cost Comparison**. The net annual parking district revenue change, shown in **Table 1**, indicates the ability of the proposed parking price increases and associated revenue forecasts to cover the forecasts of expenditures/ revenue losses. As shown, after generating positive Year 1 net revenues, there is a net deficit in Years 2 and 3, when debt service is being paid on the new garage without any offsetting operational revenues. By Year 5, there is net annual surplus of about $290,000 in nominal dollar terms. If the forecasts were extended out over a longer period, this annual surplus would gradually decrease as cost inflation continues for several items while revenues remain flat until future increases are enacted.

Table 1 **Summary of Parking Financial Model (nominal dollars)**

Revenue/ Cost Item	Year 1 2019	Year 2 2020	Year 3 2021	Year 4 2022	Year 5 2023
New Revenues from Price Increases					
Parking Permits	$127,368	$316,608	$514,488	$712,368	$712,368
Lots and Garages	$1,352,273	$2,082,245	$2,099,062	$1,832,815	$1,832,815
Meters	$419,339	$1,183,293	$1,183,293	$1,088,439	$1,088,439
Total (rounded)	**$1,898,981**	**$3,582,146**	**$3,796,842**	**$3,633,621**	**$3,633,621**
Existing Cost Inflation (minus current fund balance)	($287,163)	($207,680)	($217,695)	($228,237)	($239,336)
Available Revenues	**$1,611,818**	**$3,374,466**	**$3,579,148**	**$3,405,385**	**$3,394,286**
TDM Program Costs	($300,000)	($309,000)	($318,270)	($327,818)	($337,653)
Losses from Deficiency Fee Phase-Out (20% each year)	($178,000)	($356,000)	($534,000)	($712,000)	($890,000)
Potential Net Revenues for Parking Garage	**$1,133,818**	**$2,709,466**	**$2,726,878**	**$2,365,567**	**$2,166,633**
Parking Garage Net Costs	$0	($2,911,173)	($2,911,173)	($1,869,508)	($1,879,258)
Net Annual Parking District Revenue Change	$1,133,818	($201,708)	($184,296)	$496,059	$287,375
Cumulative New Parking District Revenue Change	**$1,133,818**	**$932,110**	**$747,814**	**$1,243,873**	**$1,531,248**

Key Model Assumptions

- **The revenue and cost forecasts are generally conservative**. The financial model generally includes conservative assumptions. For example, the model incorporates the high-end cost estimate for the parking garage and assumes two full years of debt service payments prior to garage operation (and associated net operating revenues). Similarly, the model incorporates a reduction in expected parking demand/ occupancy in response to price increases. It should be noted, however, that the model does not evaluate a worst-case scenario (for parking revenues) where a major recession occurs or a technological change (and pricing) substantially reduces parking demand.

- **Parking Price Increases and Demand Responses**. All other things being equal, an increase in parking pricing will result in some level of reduction in parking demand. The level of parking demand (and hence occupancy reduction) depends on a number of circumstances, including the overall level of demand for parking relative to supply, the alternative options and pricing of parking/ access, and the general price of parking relative to the planned activities. Donald Shoup conducted a review of parking pricing elasticity of demand studies and noted a range of between 0.1 and 0.6, with a typical "mid-point" of 0.3. This translates into the observation that parking demand generally decreases between 0.1 and 0.6 percent for every 1 percent increase in parking pricing. For the City of Santa Cruz, where parking demand is high, current pricing is low, and where parking supply will be decreasing, the financial model uses, in most cases, a demand elasticity at the low end of the range (0.1). In some cases (e.g. for permits), no reduction in demand is assumed as the current waiting list is substantial.

Overall Observations

While the forecasts in the financial model indicate an ability for the increased revenues to cover the lost revenues/ increased costs on a cumulative basis over the five-year forecast period, the City should consider the following three issues as it moves forward with its plans:

- **Parking Garage Costs, Debt Service, and Bond Issuance**. Based on the outcomes of the financial model and uncertainties over actual parking garage costs, interest rates, and other bond-relate factors, it will be important for the City to have a robust plan for covering debt service payments throughout the term of a bond issuance as well as for indicating to investors the appropriate coverage, reserves, etc.

- **Effects of Cost Inflation**. Because parking rates remain constant in nominal dollar terms in between periodic decisions to increase rates, while operating and management costs increase with inflation, any net surpluses will tend to erode gradually over time. It will be important for the City to track the trendline balance and review pricing again in the future.

- **Managing Economic Uncertainty**. With market cycles all but inevitable, it will be important for the City to have a plan to manage Parking District finances during an economic downturn. The recent and substantial recession likely provided some lessons in managing these issues, though it will still be important to have a plan for this eventuality in combination with any of the additional investments the City takes on.