Workbook Narrative Section IV – Consultant Analysis

Reference: Corresponds to Chapter IV of Task Force Workbook

In order to assist in determining the feasibility and challenges associated with each of the three framework variations, the CVSP Technical Consultants were given the task of reviewing various elements from the three framework variations discussed in the previous chapter.

The CVSP Technical Consultants were asked to review the three framework variations in context with the Filtering Criteria that had been developed through public comments and direction received from the Task Force. The Filtering Criteria, which the Consultants were asked to use, consisted of the following:

Technical Feasibility
Regulatory Feasibility
Ecological Sustainability
Cost/Value
Inertia [How does it start? / How does it grow?]
Developability
Risk
Social Equity
Contribution to San José and Region
Council's Vision and Expectations
Traffic Impacts
Healthy Lifestyle
Walkability
Equity Spread: Cost & Benefits

Because the CVSP Technical Consultants are specialists in particular technical fields, not all of the above criteria were pertinent and were therefore not necessarily included within the individual reviews.

The Consultants were asked to review and comment on the four main framework elements.

The first element was to determine which of three concepts would result in achieving the goal of creating a realistic and viable Focal Feature for the community. The ideas put forth for review were: a park, a series of small lakes, and, a central lake. The second element to be considered was to determine the appropriate alignment and design for Fisher Creek. The three alternatives to be considered dealt with: leaving Fisher Creek in its existing condition; retaining Fisher Creek in its present location, but enhancing the value of the creek, plus adding an additional reach for the creek which would generally follow an historic alignment; and finally, to relocate Fisher Creek to an alignment which would follow closely the historic alignment of the creek near the western edge of the valley. The third major element to be considered was the configuration of

the internal transit system. Three alignments were to be reviewed. These consisted of a Spoke system, a Loop system, and, a Spine system. The fourth and last element to be reviewed was the alignment for the Parkway. Again three alternatives were reviewed. They consisted of: putting the Parkway on the Valley floor south of Bailey Avenue; the establishment of a Grand Boulevard in place of Bailey Avenue in the area adjacent to IBM; and, finally, running the Parkway over the hill and behind IBM.

The Consultants' reports are located in Chapter IV at the back of this workbook. The following is a summary of those reviews.

ALIGNMENT OF FISHER CREEK

The relocation of Fisher Creek to a new alignment that closely follows the historic location of the creek was determined to be the preferable option.

Geological

Restoration of Fisher Creek to its natural alignment will improve the geotechnical aspects of the area by controlling flooding, by efficiently transporting off-site storm water entering the site from the south and west around the project area, and by enabling flatter bank slopes and shallower channel depths to be considered during design. Ponding and flooding will cause the alluvial foundation soils to lose strength and may create an undesirable environment for structures and roadways unless designed to accommodate such conditions. Realigning Fisher Creek to its natural location outside core development areas will likely be more suited to keep off-site and on-site storm water transport separate, and for edge buffers and riparian corridors to be designed with flatter and shallower channel dimensions. Flatter slope gradients improve the stability of the bank slopes and reduce the impact of erosion, while shallower bank heights reduce the depth of cuts, which may avoid seasonal high groundwater levels.

Biological

The biological and regulatory consequences of the differing alignments of Fisher Creek found that all three alternatives would require similar levels of permitting and consultation with the federal, state, and local regulatory agencies. However, the direction of Fisher Creek into a focal lake is not favored by these agencies and therefore would be less feasible on a regulatory level. Fisher Creek in its current alignment would likely not be ecologically sustainable after project construction as it would not be able to accommodate the flow regimes imposed by urban environments. Directing the flow of Fisher Creek through a focal lake would likely have major impacts on the water quality of Fisher Creek and Coyote Creek, affecting the long-term ecological sustainability of these resources. The relocated Fisher Creek would impact the greatest amount of wetland and

riparian habitat among the alternatives. However, the relocation of Fisher Creek to its historic alignment, the inclusion of mitigation wetlands and riparian areas along this restored stream, the presence of preserved open space to the west, and the buffering effects of the greenway/parkway to the east would greatly increase the biological alternative values over the current Fisher Creek alignment. If the final Core Plan design minimizes the wetland impacts to the maximum practicable extent and incorporates necessary mitigation along the restored creek corridor, this would be the most ecologically sustainable alternative.

Hydrological

The return of Fisher Creek to its natural alignment in the lower elevations adjacent to the Santa Teresa Hills would eliminate the need for artificial levees which were necessitated when the existing Fisher Creek channel was excavated to help reclaim lands in the lower elevations for agricultural production it was aligned adjacent to according to property lines and other considerations rather than the dictates of topography. The previously excavated Fisher Creek channel is not sufficient to provide one-percent flood protection meeting National Flood Insurance Program standards, either under existing conditions or after urbanization, so additional flood flow conveyance is required even if the existing Fisher Creek channel is maintained. Relocating the Fisher Creek channel into that flood conveyance seems to be a more natural course of action than building a bifurcated flood conveyance system. Avoiding the flow bifurcation allows for a more sustainable riparian corridor in the new flood bypass including seasonal wetlands within the natural Fisher Creek corridor, and relocating the creek places this corridor in proximity to natural habitats in the adjacent Santa Teresa foothills.

Market

From a marketing standpoint, the strongest economic benefits result from the relocation of Fisher Creek and the elimination of the existing Fisher Creek alignment. This alternative requires the least amount of land to be consumed since all of Fisher Creek would be in one location, thereby maximizing the amount of land available for development.

FOCAL FEATURE

Of the three alternatives, the Central Lake was found to be the preferred solution for creating a focal feature for Coyote Valley.

Geological

All three alternatives functioned similarly, however, the lake provided the opportunity for the creation of a large source of fill material for the project. This opportunity would be created from the excavation of the lake, which is estimated to range from fifteen to thirty feet in depth. The

excavation of the lake would result in approximately 2.24 million cubic yards of material.

Biological
The lake, based on the assumption that Fisher Creek was connected to the lake, could be the most difficult to develop of the three alternatives. However, if Fisher Creek and the lake were separated, which is the current thinking, the lake would result in the most sustainable alternative.

Hydrological
The Lake is the preferred alternative. Due to the need for storm detention during extreme runoff events, the lake provides the necessary area to handle this runoff. Without the lake, additional floodplain storage would have to be created within the project.

Market
The Central Lake provides the most value to the project. The Lake would provide the greatest value to the project as a catalyst for growth. Also, the lake would create an amenity for Coyote Valley and provide the strongest economic benefit.

TRANSIT ALIGNMENT

The preferred transit alternative was the Spoke system.

Traffic
Based on the travel demand model's forecast that 28 percent of trips associated with the development would be "internalized" it must be assumed that there will be a viable market for an internal transit system. Of the three alternatives, the Spoke transit system would provide the opportunity for the greatest number of businesses and households to take advantage of the system, due to the expanded area of service it would provide.

Market
From a market standpoint, the Spoke and Loop alternatives would serve the most land and add the most value to the development. However, the Spine alternative would require the least amount of land to development and would have the greatest opportunity to use existing rights-of-way. The three alternatives offer comparable benefits overall.

PARKWAY SYSTEM ALIGNMENT

The locating of the Parkway on the Valley Floor was the overall preferred alignment.

Traffic

From a traffic standpoint, all three of the Parkway alignments will function adequately. The preferred alignment is to locate the Parkway on the Valley Floor due primarily to cost savings associated with this alignment.

Market

There is not a clear preferred alignment for the Parkway from an economic perspective. Both the Valley Floor and the Grand Boulevard alignments offer comparable economic benefits.