OPEN SPACE AND INFRASTRUCTURE MASTER PLAN

section 3


3

Section 3 - OPEN SPACE AND INFRASTRUCTURE MASTER PLAN

PREFERRED ALTERNATIVE

The third section of this Summary Report outlines the result and final product of the master planning effort, the development of the **Open Space and Infrastructure Master Plan.** The section is divided into three sub-sections, reflecting the three main components of the Plan:

- **Parks** Master Plan
- **Streetscape** Master Plan
- **Infrastructure** Master Plan

The Plan builds on the scenarios explorations presented on section 2, focusing on the development of the preferred alternative that summarized the strengths of both and, as indicated in its name, reflected the community's preferred approaches.

OVERALL CONCEPT AND GUIDING PRINCIPLES

Common to all three parts of the Parks and Infrastructure Master Plan are the Overall Concept and Guiding Principles. Prior to the development of specific design recommendations, the consultant team identified the over arching direction for the Plan, which emerged from listening to the community and responding to their expectations and priorities.

Outlined on the next page are the Overall Master Planning Principles, which describe the approach to the main elements of the Plan as a result of the evaluation of Scenarios A and B described before. The Principles are organized into four categories as defined during the Master Plan foundation phase of the work: stream restoration, trails and paths, urban character, and events and activities.

In conjunction to these action-specific Principles, the consultants developed three main concepts that could inform decision-making during the master planning process:

- OVERALL CONCEPT 1 : Urban Character Zones
- OVERALL CONCEPT 2 : Site Connectivity
- OVERALL CONCEPT 3 : Storm Management and Low Impact Design

These overall concepts are described more in details in the following pages.

OVERALL MASTER PLANNING PRINCIPLES

Evaluation Criteria Applied

STREAM RESTORATION 1

Partial re-circulation system for water feature.
Preservation & enhancement of **riparian environment** on Jennings Ditch.
Creation of new **riparian terraces** on Mill Creek at Civic Center Park.
Preservation of all **existing Oaks**.

TRAILS + PATHS 2

Park engages City via wooded **parkways** and planting + paving **extensions.**
Meandering park trails respond to new **topography** providing **access** to all areas of the park.

URBAN CHARACTER 3

Urban form **defined** by **natural systems**, creating a **modified** curvilinear **grid**.
Transitions are provided in **layers** and **overalps**.

EVENTS + ACTIVITIES 4

Large events in **park**.
Small events in **Civic Center park**.
Program reponds to natural or urban **function**.

Main Ideas for Sustainability

permeable paving

managed irrigation

solar lighting

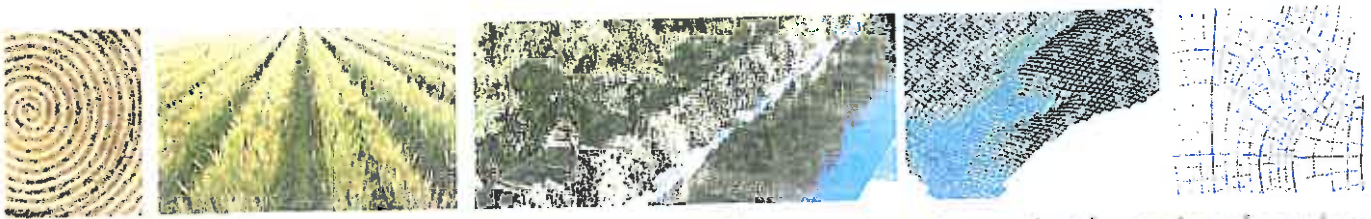
sidewalk swales

local stormwater separators and filters

reduced re-circulation

OVERALL CONCEPT AND GUIDING PRINCIPLES

INSPIRATION



modified grid agricultural irrigation layering urban character by natural system
grid agricultural pattern grid weaving gradations natural system responds to urban morphology

ral hydrology and geomorphology to reinstitute a healthy ecosystem

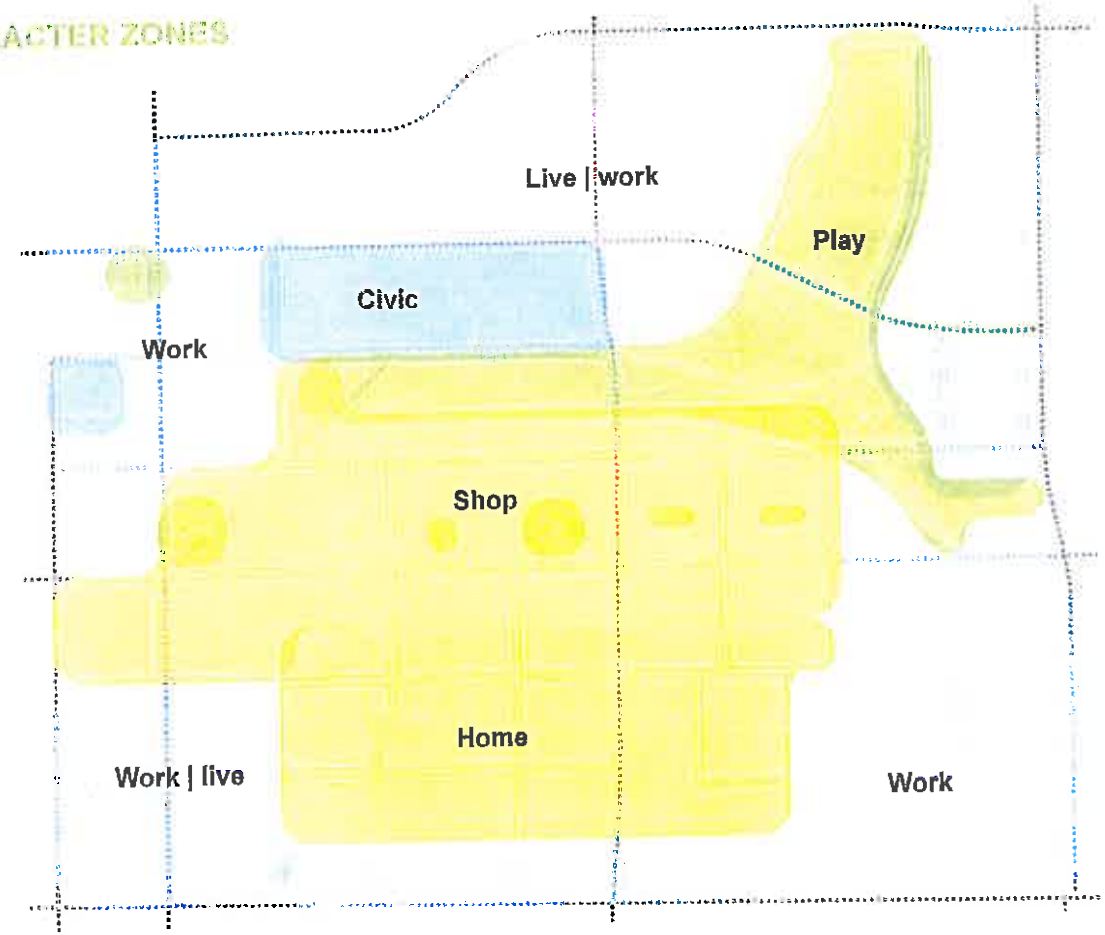
The City of Visalia is located in the eastern edge of central California, near the foothills of the Sierra Nevada. Its geomorphology is one of flat river valleys and soft alluvial fans.

In these flat valleys, creeks and rivers meander slowly forming large arching shapes that sometimes result in oxbow lakes and wetlands. In contrast, the zones closer to the hills are shaped by the effect of several years of alluvial deposits that form large fans of soil and gravel.

Although not present in the immediate study area, these elements represent the regional landscape and suggest a natural language for form-making that could be expressed in the small scale interventions of the Plan.

OVERALL CONCEPT 1: urban character zones

SIX CHARACTER ZONES



Life	Character
CIVIC	
day time active large gatherings civic events ceremony public	urban formal high end materials refined quality primarily hardscape identity setting
PLAY / PARK	
strolling excercise morning, day, evening respite dog-walking views into park	parkway - street as part of park choice, sidewalks and paths habitat green soft natural textures shade trees
HOME	
less active street morning and evening neighbors chatting dog-walking mail delivery public to private buffer walk to work walk to school play driveways	consistant tree as street identity understory varies by owner driveways part of front yard neighborhood traffic calming habitat, natives
SHOP	
active day and night businesses spill out onto sidewalk : cafe, shopping window shopping store entries service access deliveries pedestrian experience parking access	lively colorful flowers, planters signage, awnings pocket plazas mid-block crossings shade lighting detail in texture and material pedestrian furnishings primarily hardscape
LIVE / WORK	
consistent activity during day and night commercial relationship to street access to businesses privacy for residences some spillover of businesses onto street deliveries	residential scale, detail, & opportunity for individuality strong building/ sidewalk connection pedestrian furnishings
WORK	
day time use walk to work walk to lunch quick outside breaks	pedestrian furnishings pocket plazas in bulbouts shaded bus-stops pedestrian friendly groun floor architecture and uses

Figure 30 . Overall Concept 1: Urban Character Zones Diagram

Per the Strategic Plan 2025, the redeveloped East Downtown Visalia area will include primarily mixed-use land uses. Nevertheless, different parts of the study area will have different emphasis on the mixture of uses: from mainly residential with small commercial, to primarily office uses with a smaller percent of commercial, etc. In response to this subtle diversity, the Parks and Infrastructure Master Plan identified six character zones that, as outlined on the legend of this graphic, will lend themselves to different types of uses (*civic, play, home, shop, live/work,* and *work*) and ultimately to different streetscape and park approach or character.

OVERALL CONCEPT 2: site connectivity

SITE CONNECTIVITY

Providing a pedestrian environment is at the forefront of the East Downtown Visalia Parks Master Plan objectives, and thus in the development of the Plan connectivity became a key overall concept. The Plan aims to provide ample walkable areas, multiple bicycle routes (in excess of the routes identified in the 2006 Visalia's Bikeway Plan Update), and a clear parking strategy to accommodate all means of transportation. Two important aspects of the area's proposed development were studied by the consultants when making decisions about the overall circulation diagrams shown in pages 68 and 70: character zones and location of opportunity sites.

By Character Zone

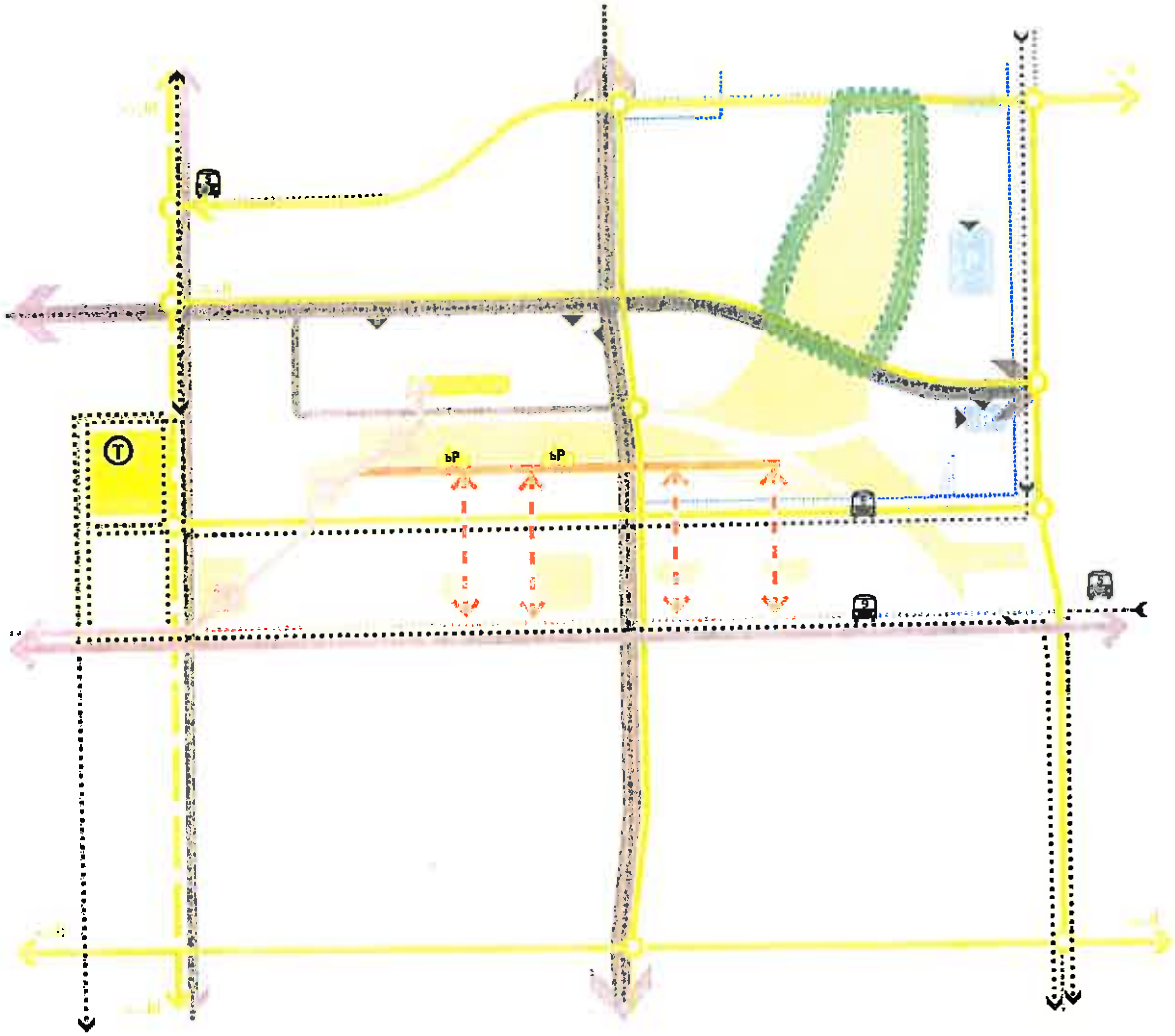
The consideration of the character zones in the development of the circulation strategy illustrated in Figure 31 suggested that main vehicular arteries should be School Avenue and Main Street (east-west) and Burke Street and Santa Fe Street (north-south) since they provide access to all character zones and make the northern portion of the plan the most accessible for vehicles, where there is *civic* and *work* emphasis. Slower traffic and multiple options for bike connectors are thus located at the heart of the *shopping* and *living (home)* zones, to encourage a pedestrian environment. In the Strategic Plan 2025, Oak Avenue was envisioned as the main vehicular, transit, and pedestrian spine, but with the Parks Master Plan proposal of interrupting Oak at Burke, Oak becomes a slow traffic, highly pedestrianized area. In the mid to long-term, Union Pacific will continue operations on the railroad that is located along Oak Avenue. This fact reinforces the idea that School should be the main traffic corridor.

Per Opportunity Sites

Overlaying the opportunity sites diagram included in the Strategic Plan 2025 over the circulation diagram prepared for this Plan allowed the consultants to understand how the new circulation elements could evolve over time. It is clear on Figure 32 that provided that most of the short-term redevelopment parcels as identified in the Strategic Plan 2025 are located along School, the early development of this street is key for it evolution. A large portion of School Avenue will be built in currently undeveloped parcels, thus the improvements proposed could be implemented without pre-existing constraints, making it a prime character-setting element of the Plan.

Additionally, the opportunity sites also suggested location where new alleys could be developed to increase connectivity in the East Downtown area, while reducing the need for on-street parking.

CONNECTIVITY CONCEPT DIAGRAM by character zone



Legend

- bP — Bicycle Parking
- Vehicle Parking
- Transit Center
- Bus Number (VCC)
- Potential Inter-block Connections ***
- Bus Route
- Parkway
- Downtown Pedestrian Walk
- Vehicular Spine
- Main Vehicular Spine
- Bike Route Class III
- Bike Lane Class II
- *Civic* Character
- *Play/Park* Character
- *Home* Character
- *Shop* Character
- *Live/Work* Character
- *Work* Character

*** Potential inter-block pedestrian connections shown for illustrative purposes only, actual location and configuration to be determined.

Figure 31 . Overall Concept 2: Site Connectivity By Character Zone

OVERALL CONCEPT AND GUIDING PRINCIPLES

CONNECTIVITY CONCEPT DIAGRAM per opportunity sites

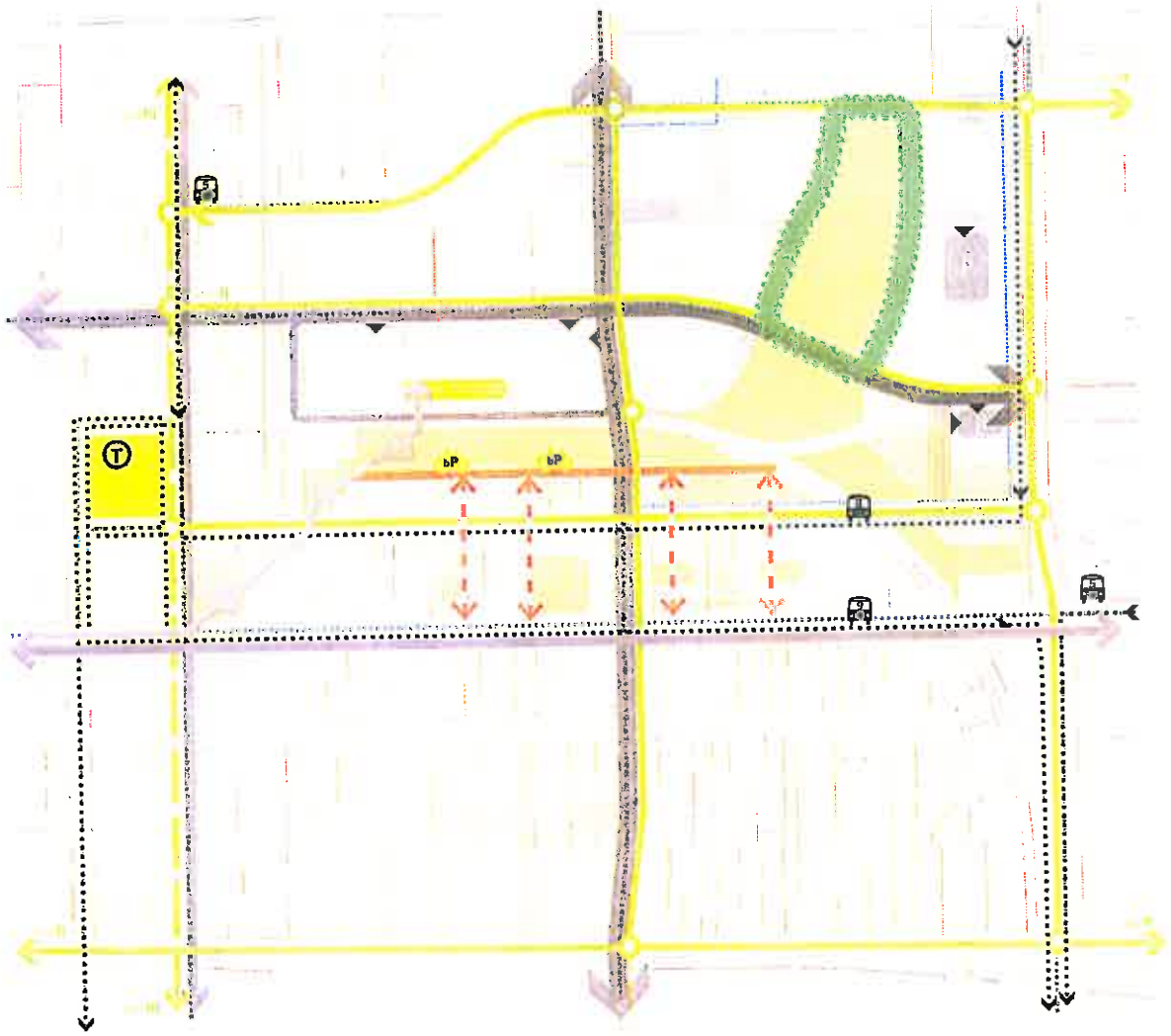


Figure 32 . Overall Concept 2: Site Connectivity Per Opportunity Sites

Legend

- bP — Bicycle Parking
- Vehicle Parking
- Transit Center
- Bus Number (VCC)
- Potential Inter-block Connections ***
- Bus Route
- Parkway
- Downtown Pedestrian Walk
- Vehicular Spine
- Main Vehicular Spine
- Bike Route Class III
- Bike Lane Class II
- Developed Site****
- Early Opportunity Site****
- Mid-Term Opportunity Site****

*** Potential inter-block pedestrian connections shown for illustrative purposes only, actual location and configuration to be determined.

**** Per Strategic Plan 2025 (p. 1-9) Availability of properties along Center Street is subject to private sector participation.

OVERALL CONCEPT 3: stormwater management and low impact design

LOW IMPACT DESIGN

Sustainability is an important value of the East Downtown Visalia Parks and Infrastructure Master Plan. The stormwater management concept reflects this value by proposing low impact design (LID) measures to control quantity and quality of stormwater runoff from public property. LID is a management strategy that emphasizes stormwater source control and multi-functional design rather than depending entirely on conventional drainage infrastructure. LID is a comprehensive watershed based approach comprised of decentralized, small-scale stormwater controls that often utilize the soil and vegetation as key treatment tools. This decentralized approach allows greater adaptability to changing environmental, economic and regulatory conditions than centralized systems. Equally important, it offers environmental enhancement and landscape amenities. It is suggested that guidelines for private property development recommend similar LID measures.

LID stormwater quantity controls look to mimic the once natural hydrology patterns of the site, minimizing negative impacts on the receiving creek systems, and reducing the need for costly piped and mechanical control structures, as well as reduce quantity related issues such as flooding. The two main strategies to achieve these goals are reducing impervious surface cover and increasing on-site infiltration.

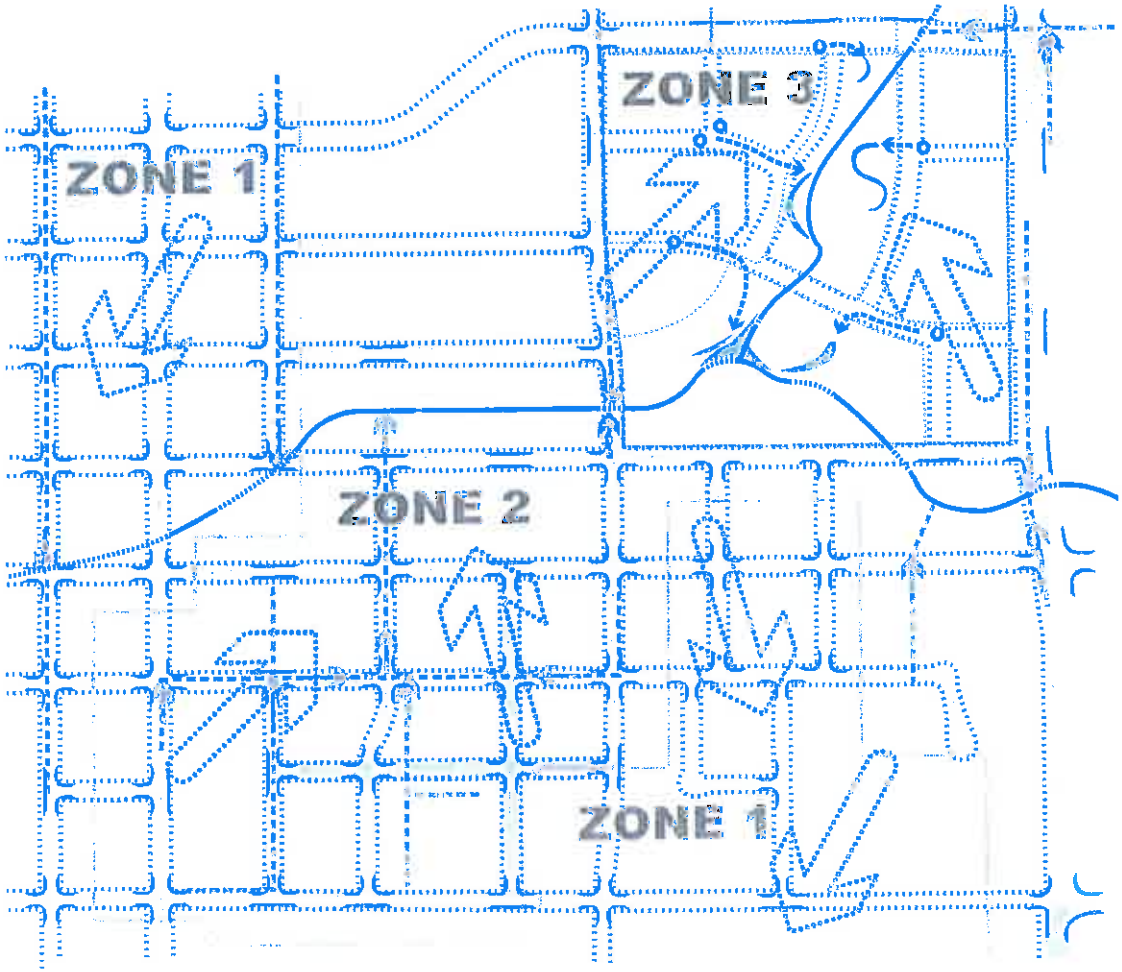
LID stormwater quality controls look to reduce or eliminate water pollution from non-point sources, typical in urban runoff. Treating runoff pollution close to the source reduces negative impacts on receiving streams, and reduces the need for centralized and costly mechanical treatment systems. The primary strategies proposed are reducing impervious surface cover, promoting infiltration, and integrating localized treatment.

CITY-WIDE STORMWATER MANAGEMENT

According to the City of Visalia 1994 Storm Water Master Plan, the project site overlaps two watersheds, Mill Creek Basin and Evans Ditch Basin. Runoff from the study area flows overland or through underground concrete pipes, or through Jennings Ditch, before emptying untreated into Mill Creek and Evans Ditch. Jennings Ditch, Mill Creek and Evans Ditch all show signs of erosion, typical of water bodies now receiving the hydrologic peak flow associated with impervious surfaces and urban development.

Visalia is generally well suited to implementing LID measures in stormwater management. The flat topography naturally distributes stormwater flow and is appropriate for decentralized, small-scale controls. The soils are generally porous, and well suited to infiltration. According to the NRCS soil survey the study area is comprised of two major soil classifications, Tagus Loam and Nord Fine Sandy Loam. Both are considered well draining, with moderate permeability and low risk of flooding. More detailed soil testing should be done prior to design of LID technologies for specific sites.

STORMWATER MANAGEMENT CONCEPT DIAGRAM



Legend

- ZONE 3: Jennings Ditch Watershed
- ZONE 2: Mill Creek Watershed
- ZONE 1: Evans Ditch Watershed
- Watershed Edge
- Catchment
- General Surface Runoff Direction
- Waterways
- Oxbow Wetlands | Streetscape LID
- Piped Water Drains to Park Oxbows

Figure 33 . Overall Concept 3: Storm Management and Low Impact Design Concept Diagram

PROJECT-SPECIFIC STORMWATER MANAGEMENT

For the purpose of this project, the Mill Creek watershed was further divided by the sub-watershed of Jennings Ditch. There is a desire to have a stormwater fed, continuously re-circulating creek feature in the stretch of Jennings Ditch within the Central Park. This dictated a different set of stormwater strategies for the Jennings Ditch sub-watershed than the Mill Creek and Evans Ditch watersheds, which focus on decentralized LID measures.

Mill Creek and Evans Ditch Watersheds – LID toolkit

For the Mill Creek and Evans Ditch watersheds, the goal is to maximize stormwater infiltration and water quality treatment close to the source. The recommended LID tools include permeable paving, bio-retention, and street trees. Permeable paving, such as interlocking pavers, porous concrete, or porous asphalt, can be easily integrated into the streetscape as a bike path or parking strip – and can be sized to treat the entire right of way. Bio-retention can be integrated into street tree planters, curb bulb-outs or planting strips. Street trees intercept, slow and absorb run-off.

Utilizing the Contra Costa County C3 guidelines, which recommend bio-retention features be sized as 4% of catchment areas, we estimate an average of a 500 s.f. feature per average street block watershed (1/2 of a crowned street, or 12,300 s.f. area).

Jennings Ditch sub-watershed – LID toolkit

The strategies for the Jenning Ditch catchment area focus on collecting the stormwater through catch basins, channeling it through pipes, and then cleansing the water through the clay-lined Central Park oxbows, before discharging into the re-circulating water feature. This maximizes stormwater catchment for the water feature, while making a central and educational feature of the water quality treatment in the oxbow bio-retention swales. The oxbow swales have been sized to treat the catchment sub-basins that are collected and piped to them.










PARKS MASTER PLAN

The first part of the Parks and Infrastructure Plan is the Parks Master Plan. As mentioned in section 1 of this document, although the Strategic Plan 2025 lists 8 distinct open spaces, the Parks Master Plan focuses on the design and recommendations for the two core parks proposed. These parks are:

1) **Civic Center Park**, which includes the Strategic Plan's Mill Creek Market Hall Plaza, the Civic Center Park, and City Hall Plaza (or the City Hall Open Space).

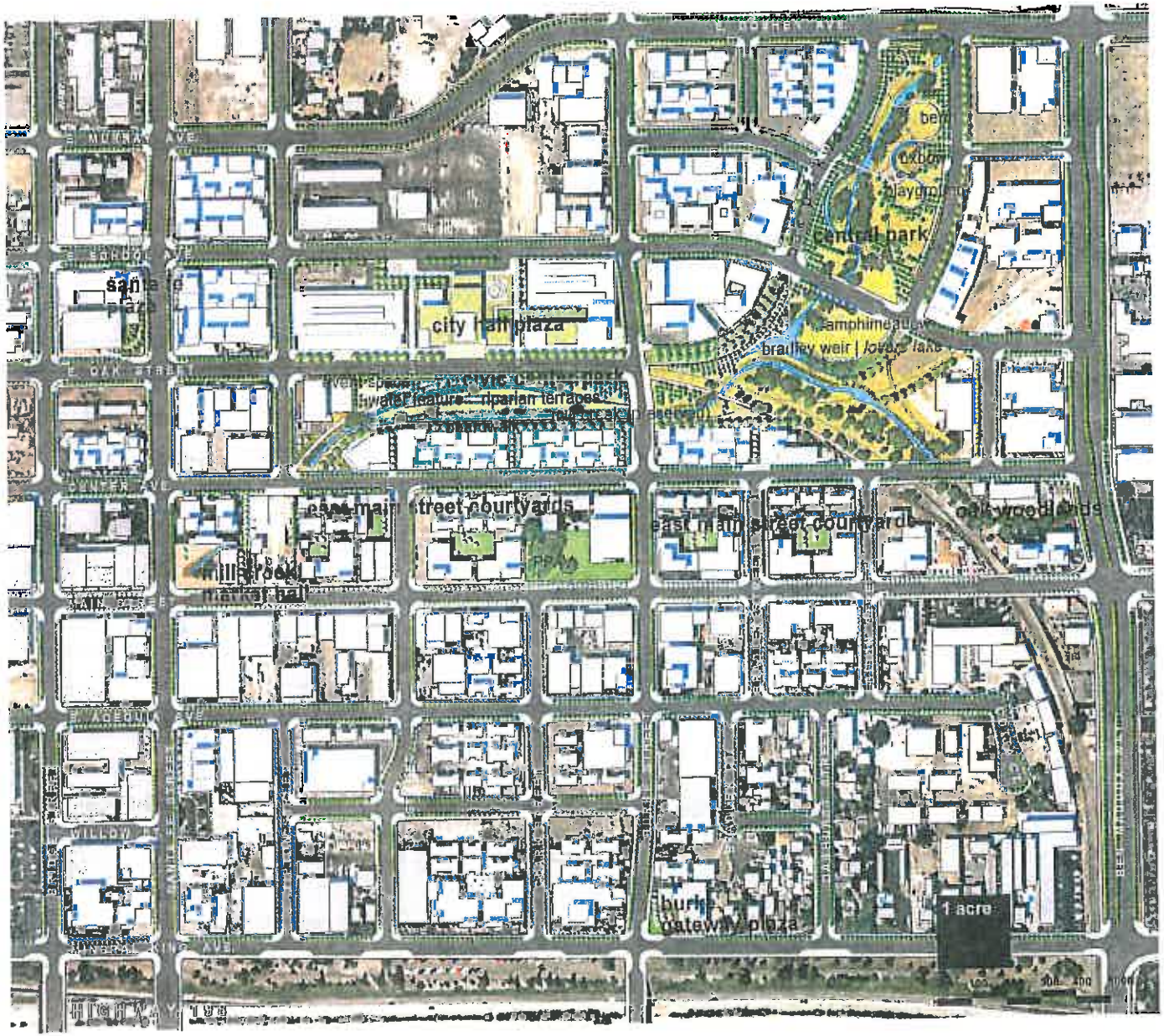
2) **Central Park**, including also the Strategic Plan's Oak Woodlands.

This sub-section of the plan describes the general character of the parks, defines the strategies utilized in their design (hydrology, grading, paving, planting, programming), and concludes with design guidelines for the core parks.

The preferred alternative site plan kept scenario's A reconfigured streets: School Avenue curves south and uses an existing ditch crossing (culvert) for going over Jennings Ditch. Two parkways (named the Valley Oak Parkway) are proposed running north-south along the Ditch.

The preferred alternative transformed Jennings into a managed water feature, providing water year-round, but preserved Mill Creek in its current seasonal regimen. For Mill Creek's segment between Tipton and Burke Streets, three sub-alternatives were considered. The sub-alternatives are described in pages 94-96, but the option illustrated in this plan is Mill Creek's option 2: preserving the current alignment of Mill Creek, adding small meanders along its way, and carving out three soft riparian terraces where native vegetation will be planted. An artificial water feature is proposed for edging the Civic Center Park. This fountain will take the form of a runnel.

PARKS AND INFRASTRUCTURE MASTER PLAN : illustrative plan



In the Central Park area, an evolution of the swale and detention ideas of scenario B are proposed in the form of what the Plan calls "oxbow" wetlands. The oxbows are detention areas in the shape of oxbow lakes that allow the creation of recharge areas without having to disturb the banks of Jennings Ditch and their mature Valley Oaks.

The oxbows also function as elements to organize the site programs, by creating enclosures and an extended walking experience.

Figure 34 . Parks and Infrastructure Master Plan

Partial re-circulation system for water feature at Jennings Ditch.
Mill Creek is **preserved** in current location with minor meanders and new riparian terraces.

Figure 35 . Master Plan Hydrology Diagram

Legend

- Seasonal Creek (Waters of the US)
- Managed Ditch (recirculating water-feature)
- Artificial Fountain
- Weir

One of the main desires expressed by community members during workshops and meetings was to include a year-round water feature for the East Downtown Visalia Parks. Per a preliminary hydrology study developed by Provost & Pritchard in 2006, the idea was to provide recirculating water in the two water bodies present on the East Downtown Visalia area: Jennings Ditch and Mill Creek. After further analysis and consultation with team hydrologists and permitting experts, the recommendation described herein was developed: 1) Provide a partial re-circulation system for a *water feature* at Jennings Ditch; 2) Preserve Mill Creek in its current hydrologic cycle, relocating north the reach between Burke and Tipton Streets, providing with minor new meanders and new riparian terraces on the north bank; and 3) Build an artificial water feature (fountain) on the Oak Street edge of Civic Center Park.

MILL CREEK

The preferred water feature alternative is made up of two different areas, Mill Creek and Jennings Ditch. The Mill Creek area is now defined by Mill Creek from the culvert under E. Center Ave. at the upstream end to the culvert under N. Tipton St. at the downstream end. As described above, this portion of the feature will remain a seasonal water feature with modified slopes on the north bank to provide additional riparian habitat and flood capacity. The south bank will remain to provide flood protection to existing buildings and be used as a flood wall in future planned development. To facilitate the development of the north bank riparian terraces the seasonal water level variance is provided in figure 6 of Appendix 1.

JENNINGS DITCH

The Jennings Ditch area is described in this preferred alternative as the area starting at the culvert under Goshen Ave at the upstream end and ending at the junction of Mill Creek and Jennings Ditch at the downstream end. The preferred water feature layout provides a 4' deep pond at the downstream end of Jennings Ditch along with three weirs placed in the existing channel alignment to create smaller ponds up stream, a plan and profile of the dry season condition are provided in Figure 8 of Appendix 1. Jennings Ditch will be connected to Mill Creek by four arch culverts which will convey storm flows from Jennings Ditch into Mill Creek. To store water in Jennings ditch check valves will be added to the downstream end of the culverts. This preferred alternative for Jennings Ditch can use either the clay or geomembrane liner to eliminate water loss from seepage. The use of a compacted clay liner will provide a natural looking impermeable barrier (see typical section on next page). This will avoid any possible impacts to the native oak trees that could be caused by the digging of anchor trenches.

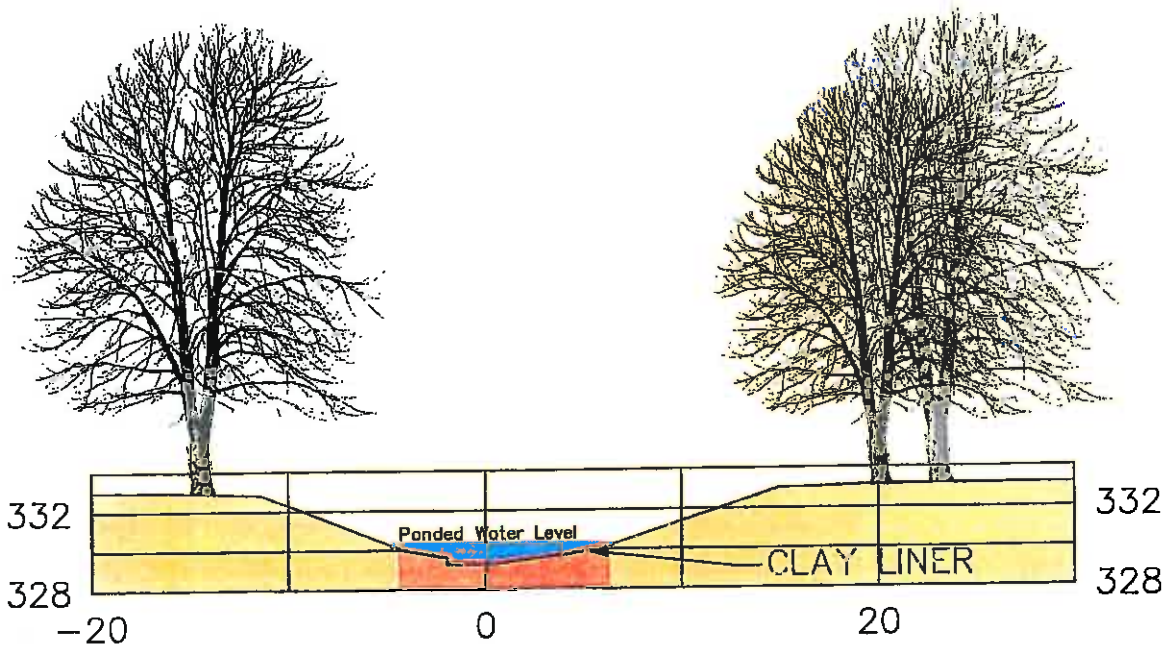
This layout increases the storage capacity of Jennings Ditch, reducing the additional water needed to maintain the water feature, without damaging native vegetation or making major alterations to the channel alignment.

Based on this preferred alternative layout Jennings Ditch is the only portion of the natural waterway that will be maintained as a year round water feature. The total surface area of the year round water feature was determined to be approximately 0.84 acres. The annual evaporation is about 3.3 acre-feet which would be offset by additional water provided by the city. This demand can be partially offset by using the storage volume of the downstream pond. The downstream pond provides an additional 0.6 to 1 acre-feet of water depending on the allowable loss of depth in the pond. Assuming that the downstream pond is allowed to go lower, the required water from other sources would be approximately 2.3 to 2.7 acre-feet. This turns out to be approximately 750,000 to 880,000 gallons a year, or the equivalent of the domestic use of two to three households.

To maintain water quality, a circulation pump will be needed to maintain a system residence time of approximately 7 days. The pump can be placed at the downstream end of Jennings ditch, and will draw water from the downstream pond and send it to the upstream end at Goshen Ave. The size of the circulation pump is mainly dependent on the flow rate and delivery pipe size. To reduce the runtime of the circulation pump a flow rate of 1000 gal/min pumping through a 12" PVC delivery pipe. The pipe could be placed along the banks of the Ditch. This flow rate requires approximately a 10 HP circulation pump.

For full description of Hydrology work developed for the East Downtown Visalia Master Plan, refer to Appendix 1.

HYDROLOGY: CREEK SECTIONS



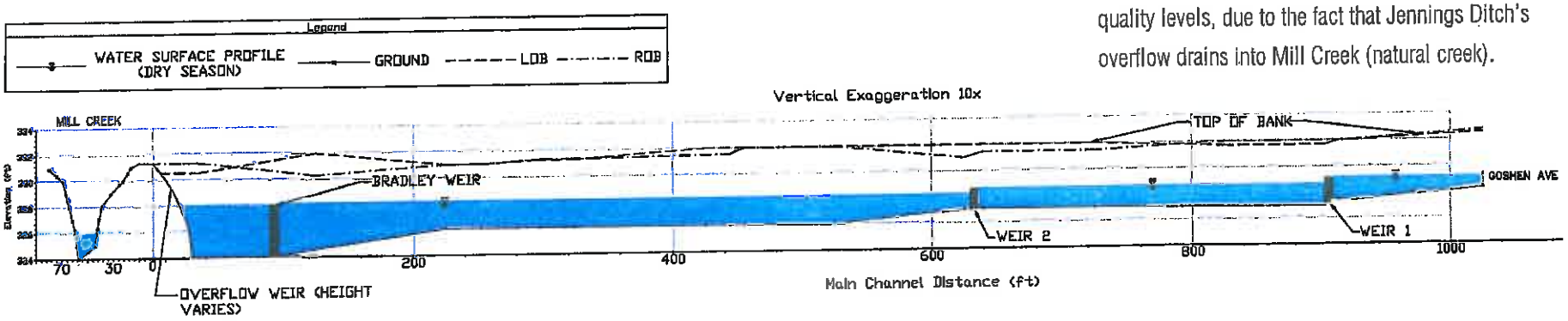


Figure 36 . Jennings Ditch Water Feature Sections

ALTERNATE WATER SOURCES FOR WATER FEATURE

Grey Water Treatment Plants

As part of the analysis for the implementation of the Jennings Ditch water feature, alternate water sources were studied. It is assumed that for the first years of its operation the additional water requirement will be covered with potable City water. Nevertheless, the long term plan is for it to be sourced from grey water treatment (package) plants associated with the East Downtown Visalia's new development. New technologies are available for "soft" and "hard" water purification of grey domestic waters.

Additional analysis will be required to determine the specific type of package plant recommended. Package plants should provide potable (or near potable) water quality levels, due to the fact that Jennings Ditch's overflow drains into Mill Creek (natural creek).

Park engages City via wooded **parkways** and planting + paving **extensions.**
Meandering park trails respond to new **topography** providing access to all areas of the park.

Figure 37 . Master Plan Circulation and Grading Diagram

Legend

- Sidewalk
- Circuit Trail
- Bike Trail
- Weir | Bridge
- Riverwalk
- Railroad Track
- Event Parking

The circulation and grading strategies in the preferred alternative are linked. The oxbows in the plan form depressions and berms on the site, become an exaggerated meandering path that maximizes the length of the park, making it feel larger than it is.

This diagram shows the main circulation elements of the plan. The meandering "circuit trail" is envisioned as a mainly strolling path with multiple areas of interest provided along the way.

A bike trail with less pronounced meanders is also recommended to provide bikers with a faster option to move through the park.

PARKS MASTER PLAN

VEGETATION: groundcover

Preservation & enhancement of **riparian environment** on Jennings Ditch.
Creation of new **riparian terraces** on Mill Creek at Civic Center Park.
Preservation of all **existing Oaks**.

Figure 38 . Master Plan Vegetation, Groundcover Diagram

Legend

- permeable paving
- irrigated lawn
- mowable meadow
- riparian edge
- wet meadow

Management of the vegetation proposed in the Plan was an issue discussed during public meetings and coordination sessions with the City. Reducing the amount of water consumption was an important objective of the Plan.

The vegetation proposed for all open spaces in the East Downtown area is recommended as primarily native, with a limited number of areas where lawn and other non-native plants are acceptable. These limited areas are shown with emerald green in Figure 38.

VEGETATION: canopy

Urban form **defined** by **natural systems**, creating a **modified** curvilinear **grid**.
Transitions are provided in **layers** and **overlaps**.

Figure 39 . Master Plan Vegetation, Canopy Diagram

Legend

- tree groves | drifts
- parkway
- interim trees
- (e) valley oaks

The approach to tree cover in the Parks Master Plan includes the use of three layers.

The first layer consists of the group of existing Valley Oaks currently growing along Jennings Ditch and Mill Creek. The Plan recommends the preservation of all existing Oaks, and thus no grading or soil disturbance is possible within their dripline.

The second layer of tree planting includes the parkway trees, which should be large canopy trees to be planted -as its name indicated - along the parkways. Some examples of large parkway trees are included in Appendix 7 of this document.

Finally, a number of tree groupings are proposed along all edges of parks to resemble orchards from the region, while creating opportunities for picnic and other smaller program sites.

PARKS MASTER PLAN

OUTDOOR PARK PROGRAMS

Large events in **park.**
Small events in **Civic Center park.**
Program responds to natural or urban **function.**

Figure 40 . Master Plan Outdoor Programs Diagram

Regarding outdoor programs, the preferred alternative proposes a large gathering area as the visual terminus of Oak Avenue. Similar to the initial community idea diagram for programming, the main picnic sites are located in the tree groves of the parks, while cafe seating is proposed along the south bank of Mill Creek.

Legend

- water
- multi-use lawn
- large event venue
- outdoor classroom
- picnic sites
- temporary market
- cafe seating
- playground
- natural landscape
- gateway
- iconic feature

CORE PARKS : CHARACTER AND DESIGN GUIDELINES

To provide additional detail for the core parks, the Master Plan includes sub-sections for the Civic Center Park and for the Central Park. Materials included are enlargement plans, typical site sections and character imagery.

The purpose of these design guidelines is to represent design intent and character. Further design development is expected to take place during the subsequent design phases of the project.

CIVIC CENTER PARK : landscape plan

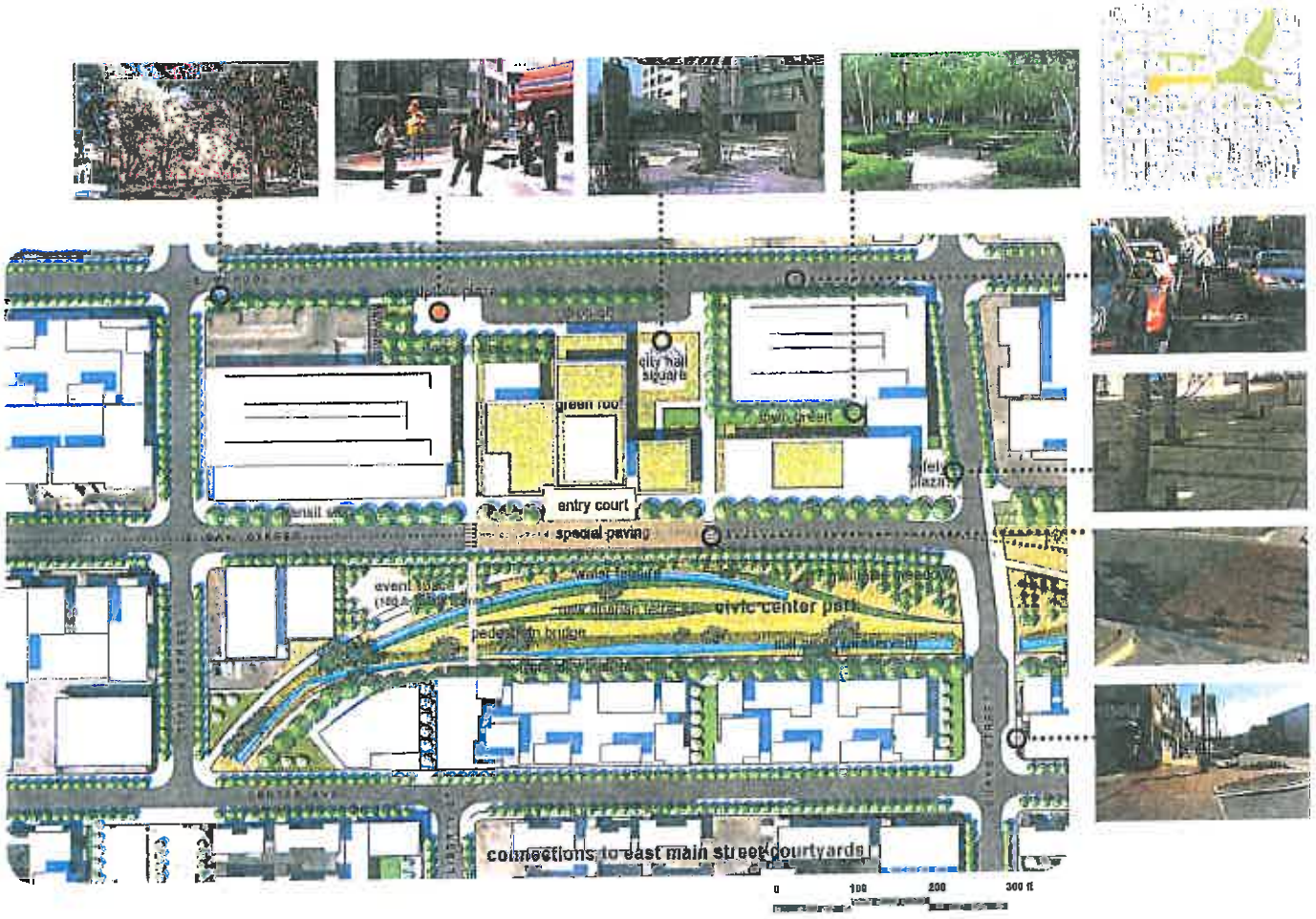


Figure 41 . Civic Center Park, Illustrative Plan

The enlarged plan shows the main features of the Civic Center Park.

Organized with Mill Creek as its main amenity, all public and programmed areas are linear in the Civic Center Park, following an east-west direction, with the exception of a circular event space near the intersection of Tipton Street and Oak Avenue, and a pedestrian bridge that connects all park spaces with the City Hall block. A promenade-like sidewalk is proposed along Oak Avenue, where large shade trees and special paving will encourage strolling and seating. From the shady promenade, users will be able to access the event plaza, the pedestrian bridge and the multi-use meadow near Burke Street. The linear water feature forms a clean edge between the use-intensive areas and the natural riparian terraces.

Preliminary design suggestions for the open spaces of the proposed City Hall are shown for illustrative purposes only.

CIVIC CENTER PARK : interim design

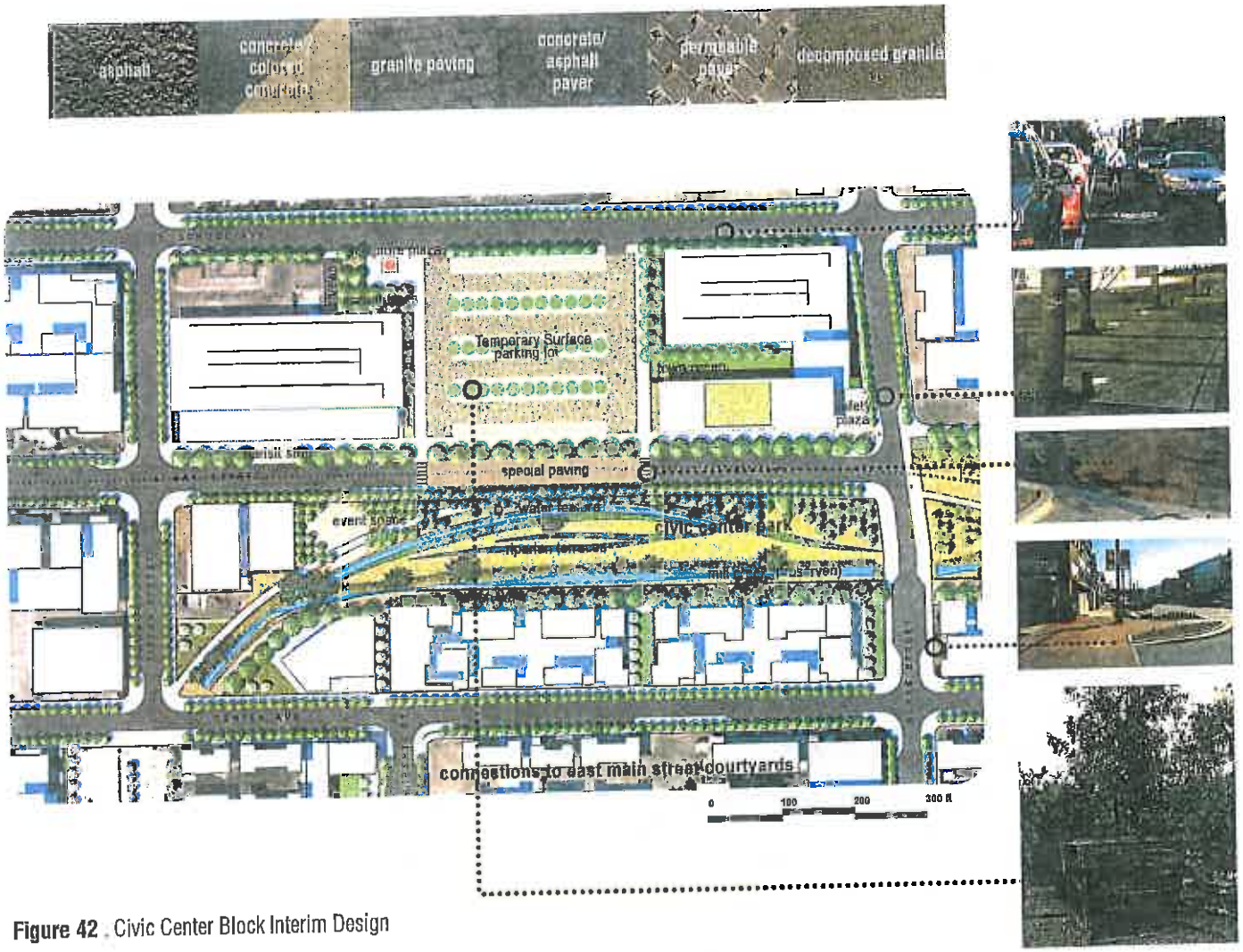


Figure 42 . Civic Center Block Interim Design

It is expected that the Civic Center block will be developed in a few phases. For this purpose, the Parks Master Plan provides a potential design approach to interim uses.

The illustrative plan on the left shows a temporary surface parking lot where trees can be planted in nursery-type boxes. These trees could be later used in subsequent phases, allowing the City to plant larger trees.

CIVIC CENTER PARK: site section

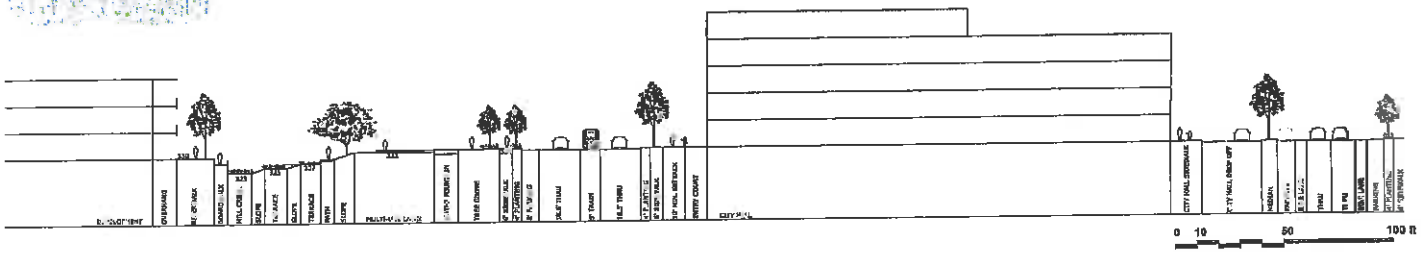


Figure 43 . Civic Center Park, Site Sections

The typical cross-section of Civic Center Park on the left shows how the existing elevation of Mill Creek is about 8 to 10 feet below the future finished surface elevation of Oak Avenue.

The design proposed for the park is thus organized on a series of linear elements that allows users to enjoy the space and take advantage of the grade change. A large promenade sidewalk is proposed along Oak Avenue, a linear fountain provides a clear edge to the space, bordering the 3 levels of riparian terraces where native planting is proposed.

As shown on pages 92 to 96, there are a few options for how Mill Creek can be enhanced. The cross-section on this page represents Mill Creek's current alignment with minor meanders and riparian terraces only on its north bank.

CIVIC CENTER PARK: character

Figure 44 . Civic Center Park, View of Potential Riverwalk, refer to Mill Creek Studies Figures 47, 48 & 50

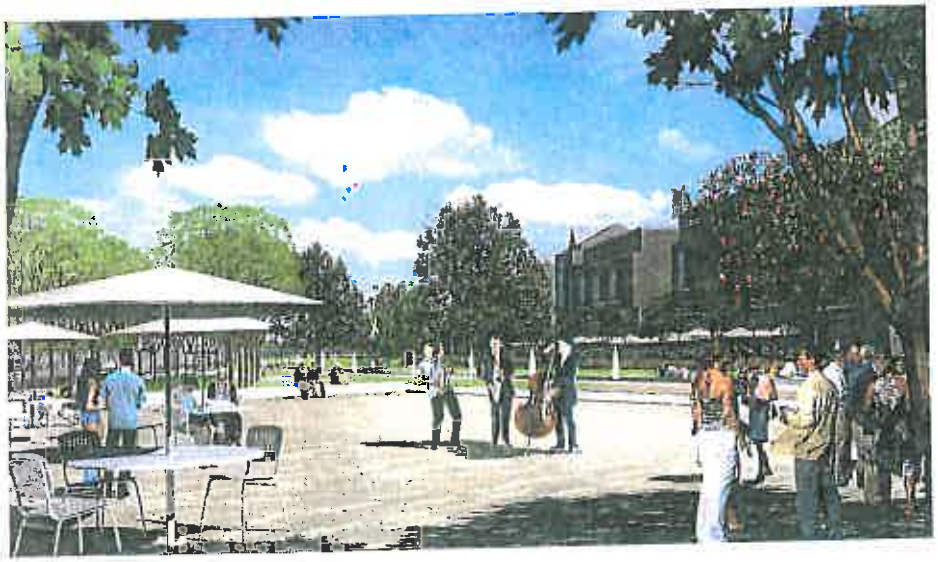


Figure 45 . Civic Center Park, View of Event Plaza

As shown on these images, the overall character for the Civic Center Park shall be congruent with the significance envisioned for the new City Hall. The adjacent open space shall be formal in character, with the use of higher quality materials and outdoor furnishings.

As illustrated on the overall programming diagram (Figure 40), the Civic Center park area will provide programs that encourage formal and informal gathering, people-viewing and passive recreation (seating, eating, reading). The small circular plaza (Figure 45) will also function as a gateway to the Civic Center area. The riverwalk/ boardwalk shown above (Figure 44), will form an edge between potential new development to the south, and a natural series of planted terraces along the seasonal waterway to the north.

CIVIC CENTER PARK: design guidelines

The civic and formal character of the Civic Center Park suggests that materials and furnishings used in this area of the East Downtown should be of higher refinement and quality than in other areas. The goal is to highlight the importance of City Hall environs and augment the sense of public pride. A restored Mill Creek will be the central element for the open space, embracing the natural character of its native planting and seasonal presence. Combining these two approaches provides a resulting park character of contrast between the highly-refined hardscape and the natural, indigenous creek.

PAVING

Recommended materials include:

- Light-colored Stone: for plazas and City Hall entry courts
- Special Unit Pavers: for accent details within main plazas or as principal material in smaller sub-plazas
- Exposed-aggregate Concrete: for paths, trails and the riverwalk

PLANTING

Recommended plant species will include (see Appendix 7 for expanded plant list):

- Flowering Pear Tree: as an accent street tree and along both sides of Oak Avenue, connecting East Downtown's character with the existing streetscape of Main Street
- Native Shade Trees: large and medium species to be used in all park areas and as secondary trees on the Oak Avenue promenade
- Grasses and Other Native Understory: for riparian terraces and all unprogrammed areas of the Civic Center Park

SITE FURNISHINGS AND SPECIAL FEATURES

Recommended elements include:

- Linear Fountain: wall or through element, depending on space available (see pages 92 to 96 for options); built with materials to match adjacent paving and the use of small jets and special lighting for accent
- Tree Grates: to increase the "walkable" area on plazas and promenade, metal tree grates are recommended
- Seating: seatwalls along plaza edges, and the linear fountain, augmented with movable or unique-looking furnishings.

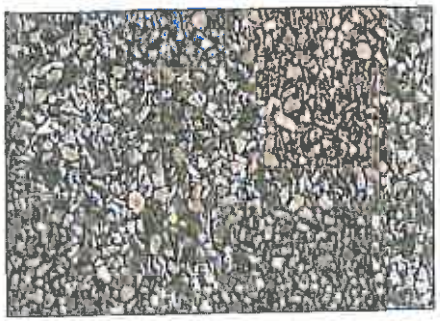
LIGHTING

Recommended materials include:

- Solar Lights: for plazas and City Hall entry courts
- Uplights: as accent for tree groves on plazas
- Accent Lights: color LEDs or similar to highlight key elements, such as the linear fountain or the riverwalk

CIVIC CENTER PARK: design guidelines imagery

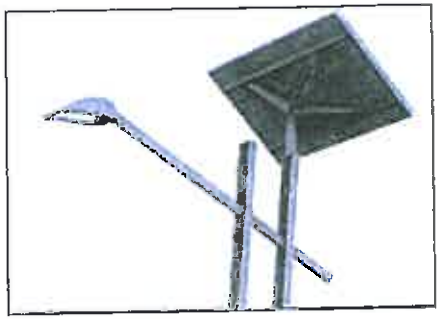
PAVING



PLANTING

SITE FURNISHINGS AND SPECIAL FEATURES

LIGHTING



POTENTIAL MILL CREEK RE-ALIGNMENT

A key aspect of the development of the Master Plan and the proposed design for the Civic Center Park is the potential re-alignment of Mill Creek. The segment of the creek located between Burke and Tipton Streets is an open channel that runs within the boundaries of private parcels. Since Mill Creek is envisioned as an amenity and a potential area for habitat creation in the Master Plan, understanding and studying its potential configuration, character and relationship with adjacent parcels is crucial for the success of the Plan.

View of existing conditions of Mill Creek between Tipton and Burke Streets, an 8-ft fence borders the channelized waterway

The following pages illustrate three possible scenarios that were studied for the rehabilitation of Mill Creek as part of the Master Plan effort. The scenarios aimed to find a balance between maximizing private development potential versus providing habitat opportunities and convenient public access.

The idea of the three creek studies is to provide initial design guidance to the City as it engages current and future private developers and other designers for the implementation phases of the East Downtown Visalia plan. Additional recommendations regarding environmental permitting implications of the re-alignment of Mill Creek are included in Appendix 2.

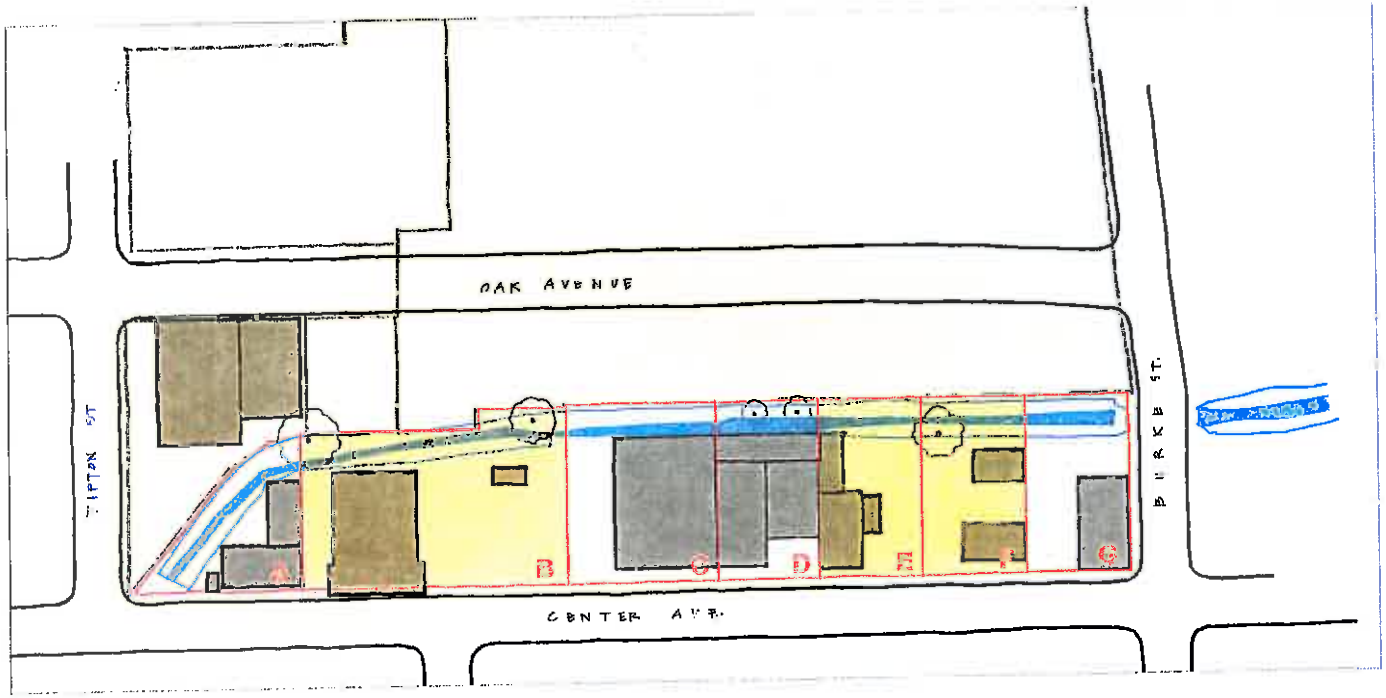


Figure 46 . Mill Creek, Existing Conditions Diagram

This plan indicates the existing alignment of Mill Creek between Burke Street and Tipton Street. As shown in the diagram, the creek is located within seven privately-owned parcels fronting Center Avenue.

Currently, a number of light industrial buildings encroach onto the creek's south bank, while an unpaved access road flanks its north bank. An existing 6 to 8-foot fence is located bordering the south edge of the creek, preventing direct engagement of the creek from the private parcels.

Legend

- Low-Flow Channel
- Creek Bank
- Private Parcel Lot Line
- Existing Tree
- City-owned Parcel
- Mid-Term Opportunity Site (per Strategic Plan 2025)
- Existing Building

As described in the Strategic Plan 2025, the City-owned parcel north of Mill Creek is to become the Civic Center Park, a central public amenity of the East Downtown Visalia area, and the "front door" to Visalia's future City Hall.

Consistent with the overall concept of the Plan, the goal is also to rehabilitate Mill Creek, forming a riparian area that could cleanse runoff and provide some natural habitat.

MILL CREEK STUDY 1

CURRENT CREEK ALIGNMENT, NO IMPROVEMENTS IN PRIVATE PARCELS

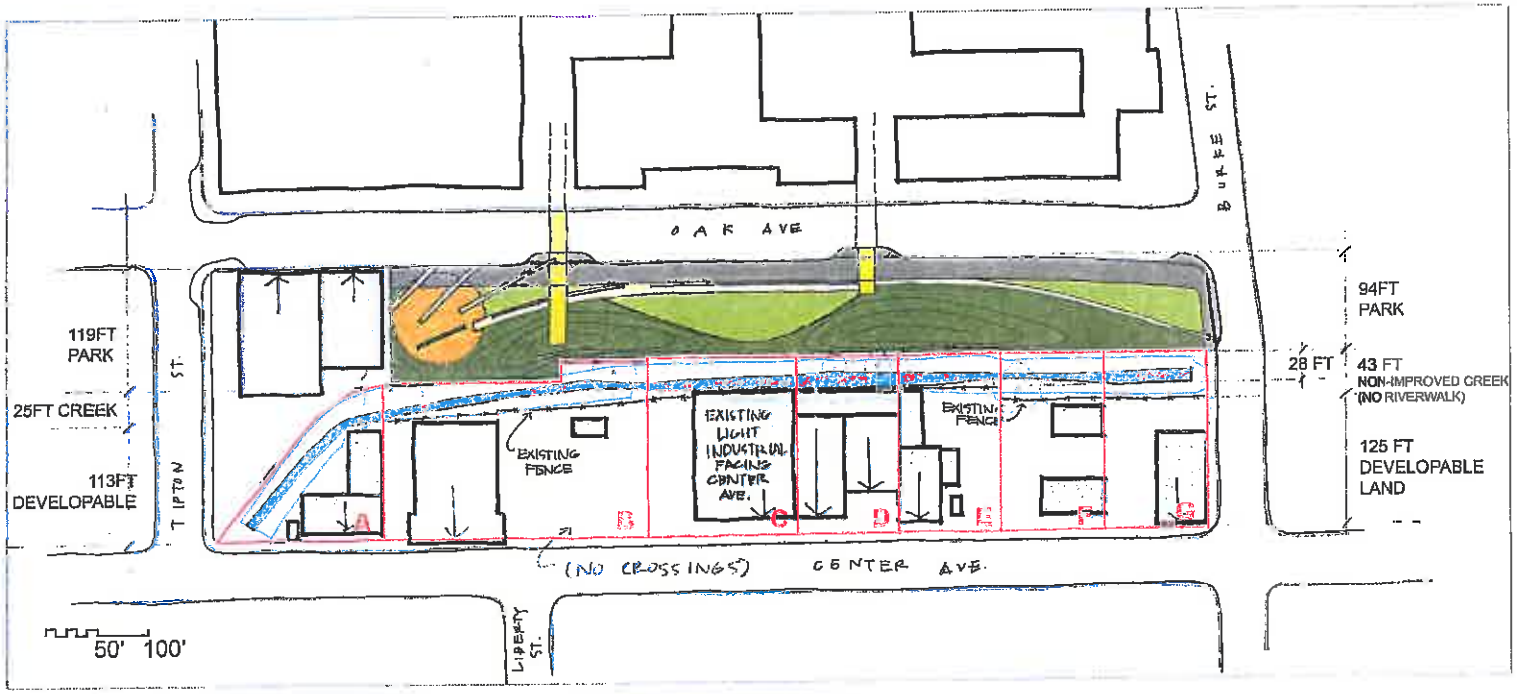


Figure 47 . Mill Creek Study 1 Diagram, Current Alignment

Legend

- Creek in Existing Alignment
- Creek Re-Alignment
- Water Feature (Artificial)
- Sidewalk
- Plaza
- Riverwalk and/or Boardwalk
- Bridge / Crossing / Mid-block Alley
- Pathway
- Lawn
- Riparian Planting (Terraces)

The first study looked at the development of a park without providing any park elements within the privately-owned parcels. In this case, Mill Creek remains in its current channelized configuration, thus the proposal includes the recommendation of creating a thick buffer zone along the creek's current north bank. Although some open space and an event plaza are provided, this study does not allow the creek to become a central feature in the park.

CURRENT CREEK ALIGNMENT WITH MINOR MEANDERS, LIMITED PARK ELEMENTS IN PRIVATE PARCELS

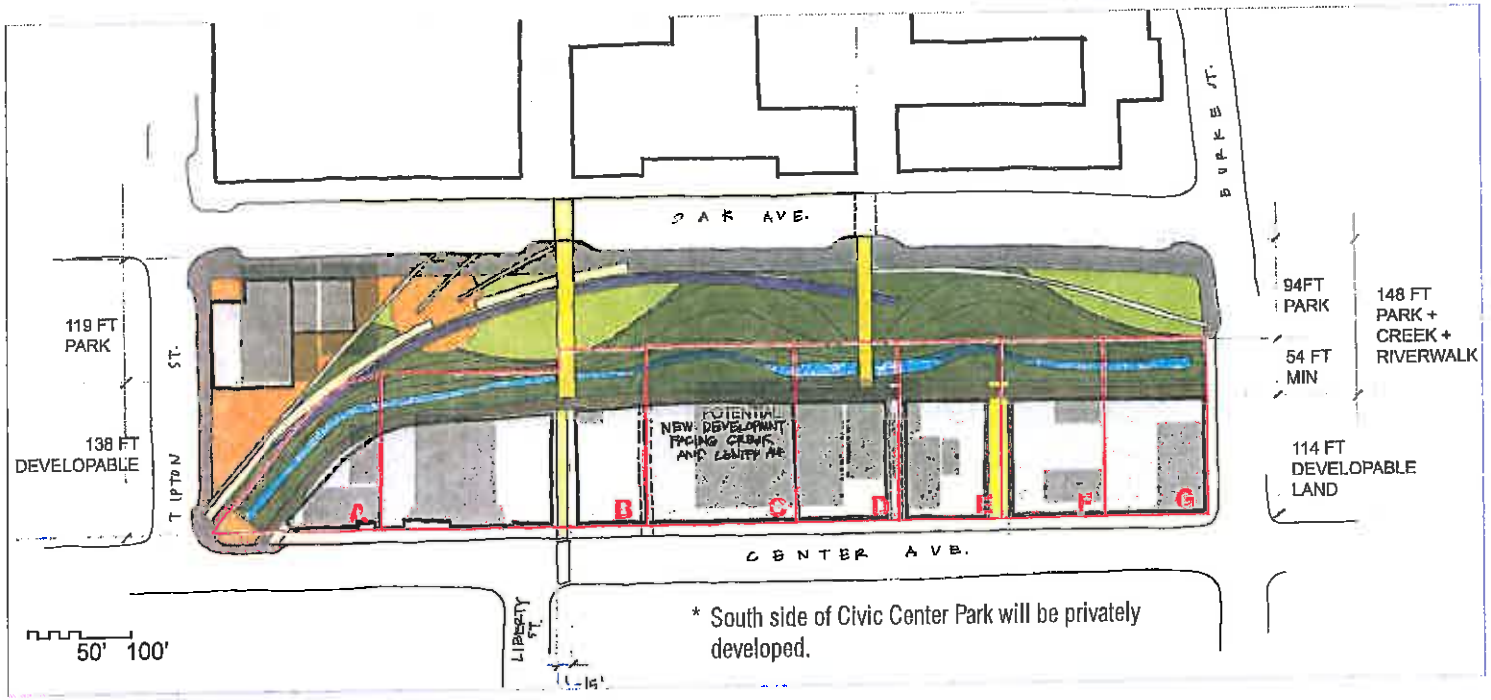


Figure 48 . Mill Creek Study 2 Diagram, Minor Meanders

Legend

- Creek in Existing Alignment
- Creek Re-Alignment
- Water Feature (Artificial)
- Sidewalk
- Plaza
- Riverwalk and/or Boardwalk
- Bridge / Crossing / Mid-block Alley
- Pathway
- Lawn
- Riparian Planting (Terraces)

Private Property where Park Elements are Recommended

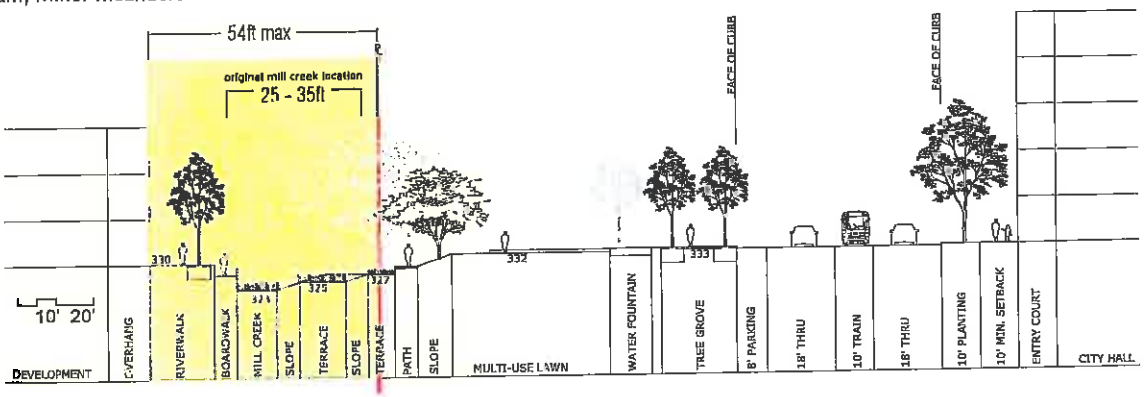


Figure 49 . Mill Creek Study 2 Section, Minor Meanders

The second study's premise is to maximize the park area, encroaching into the private parcels (up to 54ft)* and proposing the inclusion of park elements within their boundaries.

This scenario is the one reflected in the Master Plan, and it includes the following recommendations:

1) Preserve Mill Creek in its current alignment, adding minor meanders to favor habitat areas;

2) Create large riparian terraces on the north bank;

3) Build a riverwalk (linear public pedestrian walk) along the south bank, incorporating a flood wall;

4) Build a linear water feature and an event plaza for public gatherings.

PARKS MASTER PLAN

MILL CREEK STUDY 3

CREEK RE-ALIGNMENT, LIMITED PARK ELEMENTS IN PRIVATE PARCELS

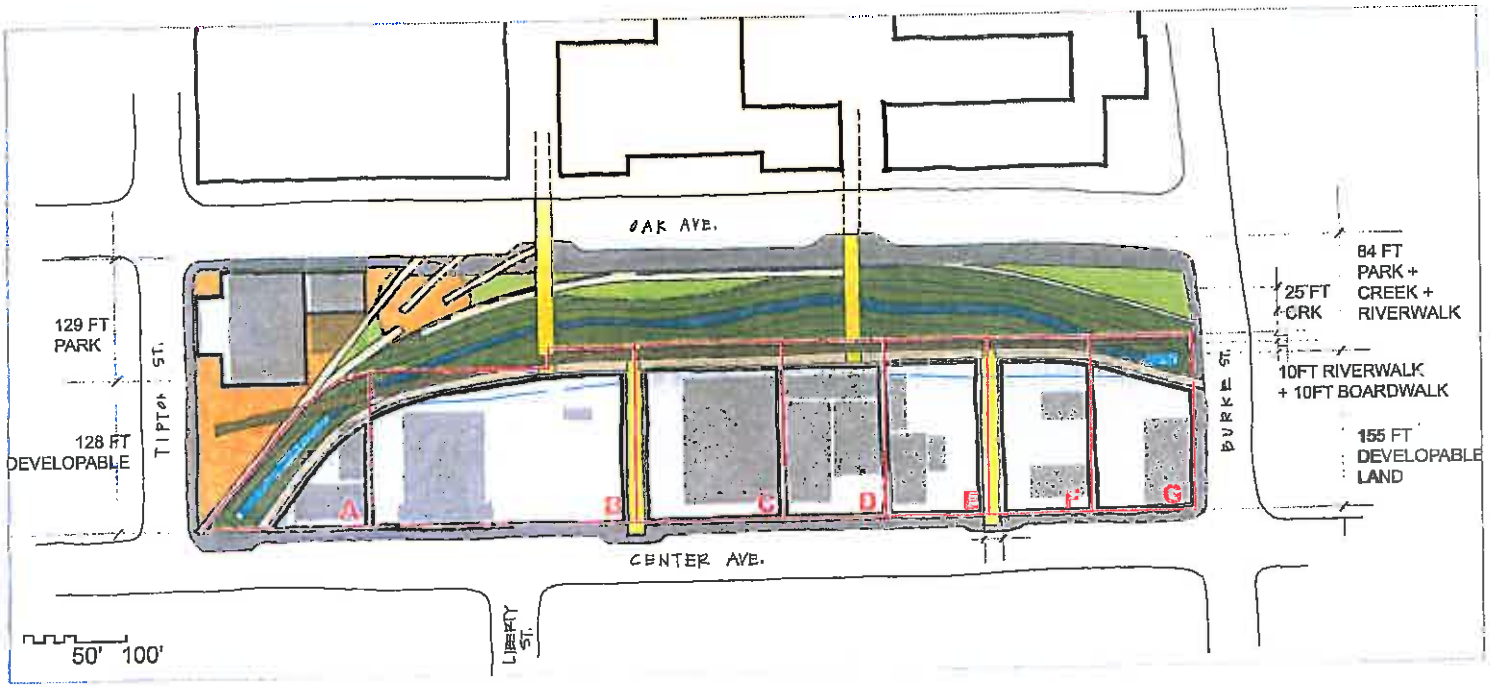


Figure 50 . Mill Creek Study 3 Diagram, Re-Alignment

Legend

- Creek In Existing Alignment
- Creek Re-Alignment
- Water Feature (Artificial)
- Sidewalk
- Plaza
- Riverwalk and/or Boardwalk
- Bridge / Crossing / Mid-block Alley
- Pathway
- Lawn
- Riparian Planting (Terraces)

Private Property where Park Elements are Recommended

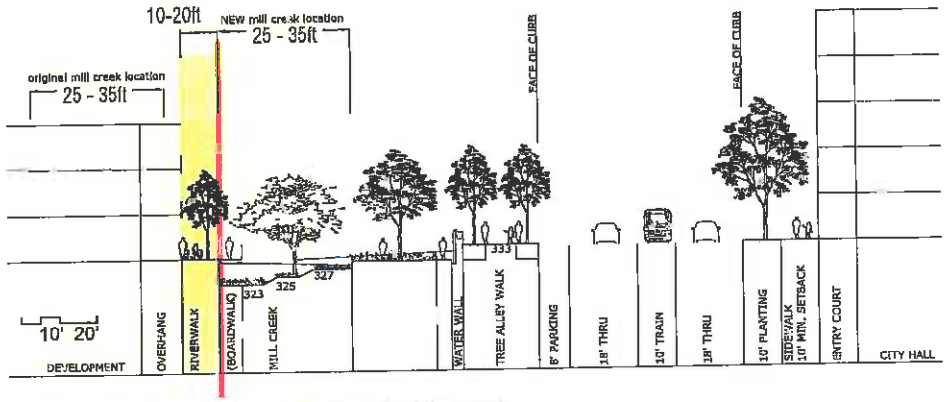


Figure 51 . Mill Creek Study 3 Section, Re-Alignment

The third and last study considered the idea of re-aligning Mill Creek in order to remove it from the private parcels. This scenario maximizes private development and allows current owners to keep existing buildings. A wide boardwalk and riverwalk, in addition to mid-block alleys, are proposed to provide public access to the creek area from Center Ave.

This scenario includes the following recommendations:

1) Re-align Mill Creek;
2) Create small riparian terraces on both banks;
3) Build a riverwalk (linear public pedestrian walk) along the south bank, incorporating a flood wall;
4) Build a narrow linear water feature and an event plaza.

POTENTIAL MILL CREEK RE-ALIGNMENT: conclusions and recommendations

As mentioned before, the three alternatives studied for Mill Creek represent potential approaches to the development of the Civic Center Park. Nonetheless, the implementation of each will require additional detailed study, design and analysis of its environmental integrity.

As an initial assessment of their feasibility, the following conclusions and recommendations should be taken into account when developing any of the options further:

- Additional design-specific hydrologic analysis will be required for the creation of meanders in Study 2 and for the total re-alignment proposed in Study 3.

- Flood capacity assessment will be necessary for the final design of the options shown in Studies 2 and 3.

- The feasibility of the option presented in Study 3 will depend on direction and potential mitigation required by State and Federal agencies with jurisdiction over Mill Creek, such as the Army Corps of Engineers, Fish and Wildlife, Fish and Game, and the Central Valley Regional Water Quality Control Board. Since the proposal recommends the re-alignment of the current Waters-of-the-US waterway to in turn create additional development area, most likely, there will be mitigation required or even opposition from such agencies to approve the design. The limited area in the Civic Center Park block prevents the creation of full 50 to 100-ft buffer zones along the creek as recommended by some of these agencies, diminishing (from their stand-point) Mill Creek's capacity for the creation of certain habitats. Since some of such sensitive habitats require complete separation from development or human contact, environmental agencies will assume the project provides only partial restoration. Careful balance between public use and habitat creation goals will be required to obtain the required permits.

PARKS MASTER PLAN

CENTRAL PARK: landscape plan

Figure 52 . Central Park, Illustrative Plan

CENTRAL PARK: landscape plan

As indicated by its name, the Central Park is envisioned as the heart of the East Downtown area. Approximately 12 acres in size, this space will be one of the largest contiguous open spaces near downtown Visalia. The main concept for the design of this park was the creation of *oxbow wetlands* behind the banks of Jennings Ditch. Inspired by naturally occurring oxbow lakes, the *oxbows* in Central Park will be a feature for collecting and detaining runoff from adjacent streets, cleaning it through passive methods to ultimately absorb it or discharge it into Jennings Ditch. The design of the *oxbows* provide an alternative to creating riparian terraces along Jennings Ditch and assures the preservation of almost 40 mature Valley Oaks located on its banks. The *oxbows* will be formed by half-circle depressions on the landscape, where wetlands and natural habitat could be created. The material extracted for the creation of the oxbows will be used to build soft planted berms where picnic, informal play, and gathering can take place.

Central Park will be primarily a place for passive recreation with a few active recreation opportunities. The space will be organized following the alignment of Jennings Ditch, its confluence with Mill Creek, and the proposed oxbow wetlands. As described previously in this section of the Plan, Jennings Ditch will be outfitted as a year-round water feature by recirculating water detained in two linear ponds (formed by the construction of two weirs) along its causeway, and a larger 4-ft-deep pond named "Lovers' Lake", located at the downstream end of the Ditch where a larger weir (named "Bradley Weir" after the name of the nearby street) will be located.

Trails and pathways will meander in the meadows of the Central Park and will cross Jennings Ditch at the location of the proposed weirs. Such weirs will function as pedestrian crossings.

The meandering trails will provide the framework or spacial organization for the park, creating sub-areas within their loops for the oxbow wetlands, the berms and all other programs proposed. The main -and larger- loop will be a mound located by "Lovers' Lake" that will function as an "amphimeadow" (outdoor gathering and performance space on a meadow planted with mowable native grasses).

CENTRAL PARK: site section

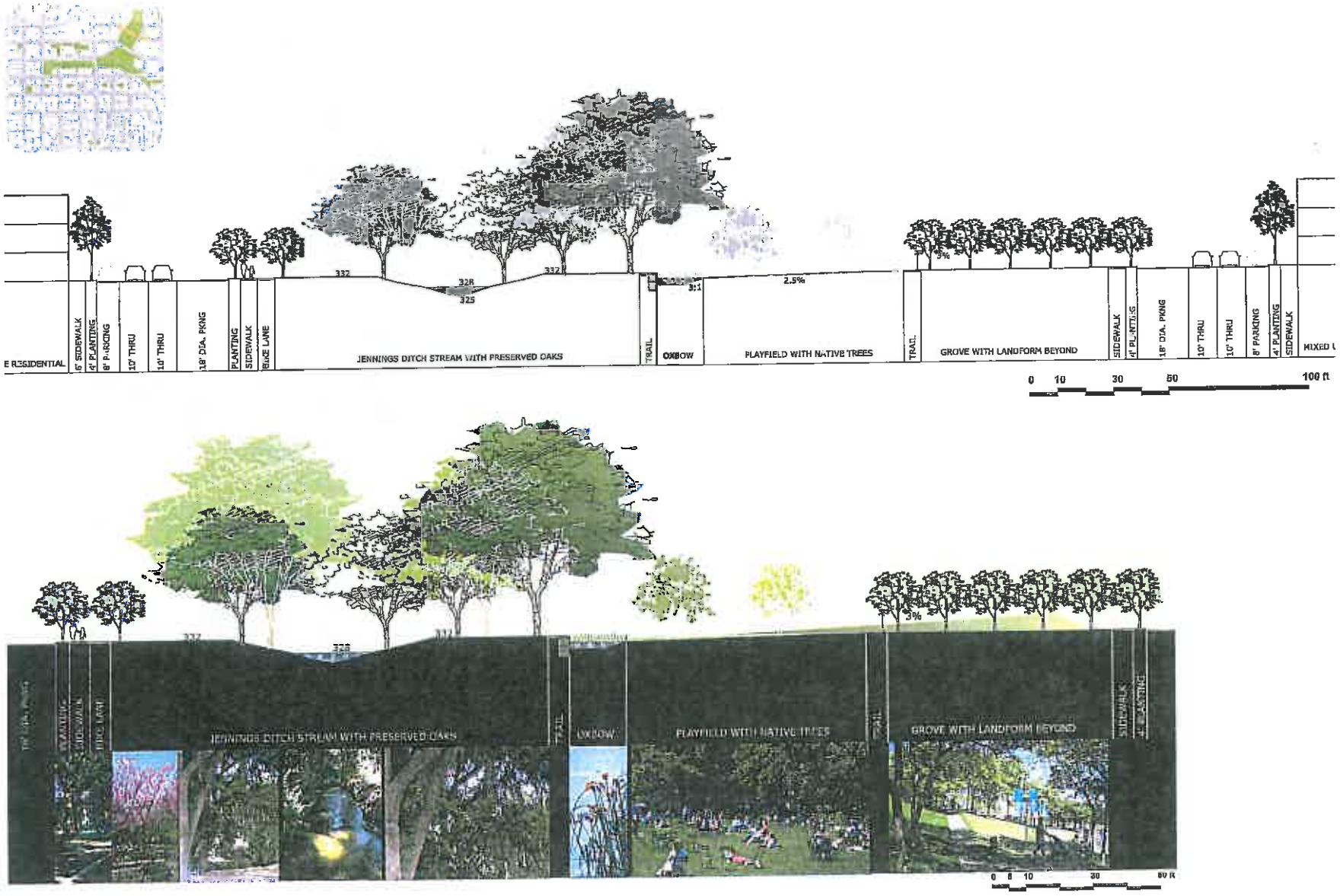


Figure 53 . Central Park, Site Sections

Figure 54 . Central Park, View of *Lovers Lake* and *Bradley Weir*

Figure 55 . Central Park, View of *Oxbows* and Berms

The overall character for the Central Park is natural and with soft lines. It is assumed that most of the planting areas will be native species with little or no irrigation.

As illustrated on the overall programming diagram (see page 84), the Central Park will provide primarily passive recreational programs, including playgrounds, picnic sites, and informal play. The year-round water feature will be the main element of the park.

Figure 54 shows "Bradley Weir" in front of "Lovers' Lake" with the amphimeadow in the background.

Figure 55 depicts the meandering paths that line the oxbows and soft berms where active and passive activities can take place. The large existing Oaks are shown following Jennings Ditch.

CENTRAL PARK: design guidelines

The natural character of the Central Park suggests that materials and furnishings used in this space should blend with the environment and include soft textures and lines. The goal would be to create a respite from the urban setting around it, while requiring minimal maintenance and clean, minimal interventions.

PAVING

Recommended materials include:

- Expossed-aggregate Concrete: for bicycle paths
- Special Unit Pavers: for accent details and pedestrian areas
- Decomposed Granite and Gravel: for pedestrian paths and play areas

PLANTING

Recommended plant species will include (refer to Appendix 7 for expanded plant list):

- Preserved Valley Oaks: protect and preserve all existing Valley Oaks and other native mature trees
- Native Shade Trees: large and medium species to be used in all park areas and along the parkways
- Grasses and Other Native Understory: mowable and non-mowable species to allow diverse programs

SITE FURNISHINGS AND SPECIAL FEATURES

Recommended elements include:

- Weir / Pedestrian Crossings: stone, wood and metal elements
- Playground Equipment: avoid standard plastic equipment, favor elements that can be artful when not occupied by kids
- Seating: seatwalls
- Gabion Walls: utilize gabion walls or other porous system to line the edges of the oxbows

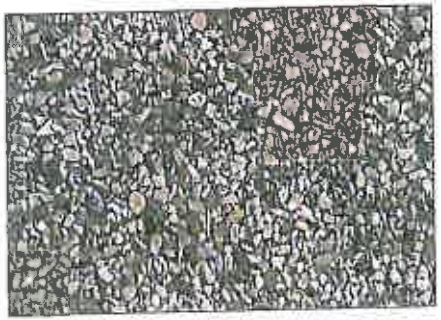
LIGHTING

Recommended materials include:

- Solar Lights: for general circulation areas
- Lanterns: as accent for tree groves or picnic sites
- Accent Lights: color LEDs or similar to highlight key elements, such as the oxbow walls

CENTRAL PARK: design guidelines imagery

PAVING



PLANTING

SITE FURNISHINGS AND SPECIAL FEATURES

LIGHTING

STREETSCAPE MASTER PLAN

The second component of the Parks and Infrastructure Master Plan is the Streetscape Master Plan. This section of the Plan includes two main topics: 1) new and existing streets and sidewalk design, and 2) design guidelines for streetscape elements, such as sidewalks, bulbouts, crosswalks, etc.

Part 1 begins with the description of the typical street sections for the East Downtown area, based on the Strategic Plan 2025 recommendations and the revisions proposed by the current study. Additionally, the Streetscape Master Plan section includes a summary of the typical sidewalks that resulted from the new and existing streets design.

Part 2 defines the possible streetscape conditions where improvements could be implemented, and presents potential applications for each in the different streets of the study area. The streetscape design recommendations included represent a framework for public realm upgrades. Site-specific design will be required for defining final improvements, materials and extent.

TYPICAL STREET SECTIONS KEY

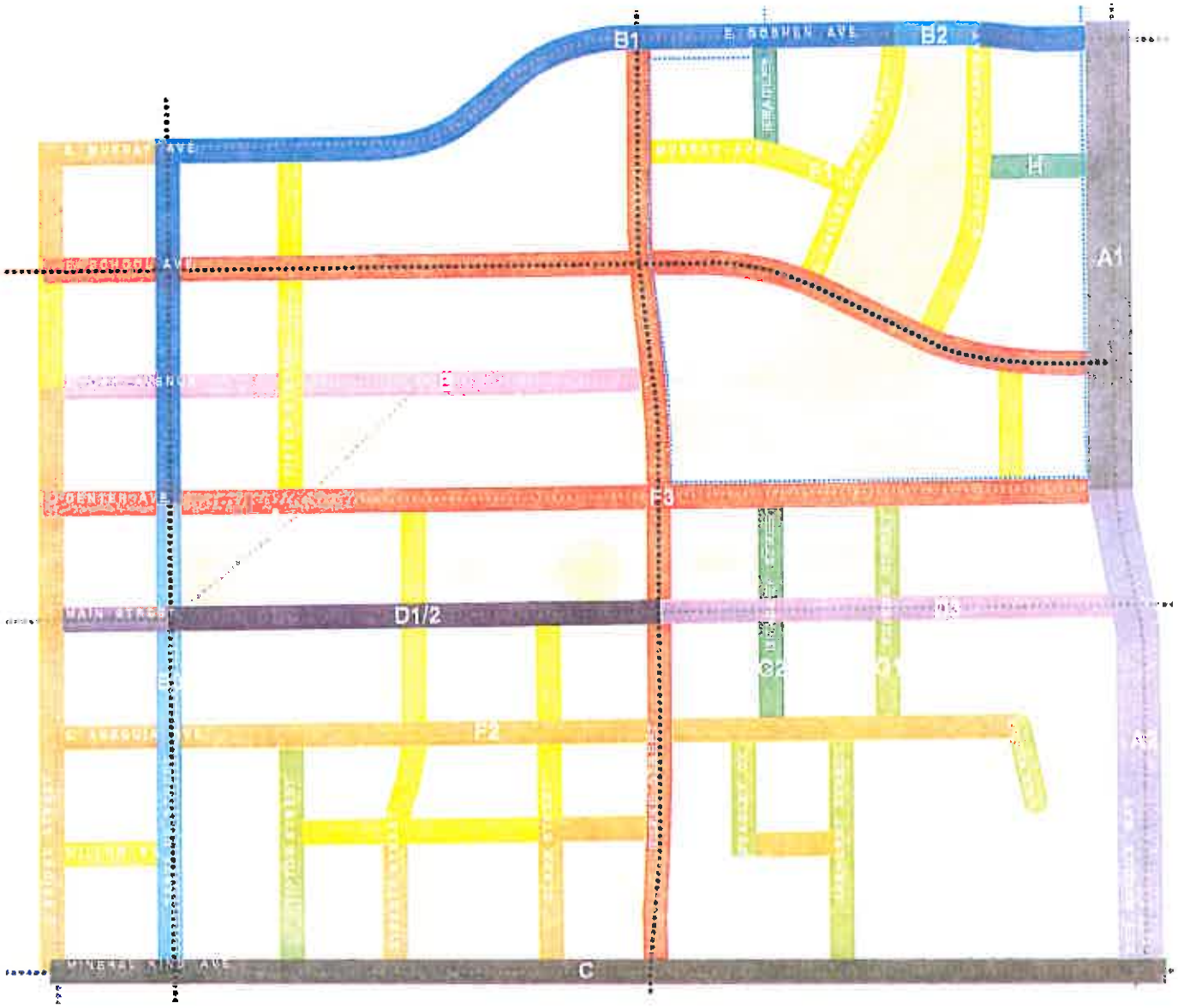


Figure 56 . Typical Street Sections Key Map

TYPICAL STREET SECTIONS SUMMARY

The existing street network in the East Downtown area is a grid system with Streets running generally north and south, and Avenues running generally east and west. As proposed on the Strategic Plan 2025, the proposed street system aims to extend the existing orthogonal grid wherever possible. Two modifications to the orthogonal grid are proposed: 1) parkways: curvilinear roads on the east and west edges of the Central Park to mimic the alignment of Jennings Ditch; and 2) School Avenue; main east-west route, it curves south after crossing Burke Street, forming a third parkway-like artery.

The general street hierarchy established by the Strategic Plan 2025 was followed to determine the typical street sections outlined in this pages:

a) Ben Maddox Way, Murray/Goshen Avenues, and Mineral King Avenue are main peripheral **thoroughfares** with 80 to 115 feet right-of-ways (street types A, B and C), typically including central medians and a proposed setback of 6 feet that extends beyond the ROW;

b) Main Street is designed assuming an average 73 foot right-of-way, which in some cases requires a private property setback. This street is envisioned as the principal **commercial street** in the East Downtown area, thus parking options are suggested, including parallel and diagonal parking. The City of Visalia will need to determine, on a case by case basis, which street section (D1, D2 or D3) will be appropriate as development occurs.

TYPICAL STREET SECTIONS

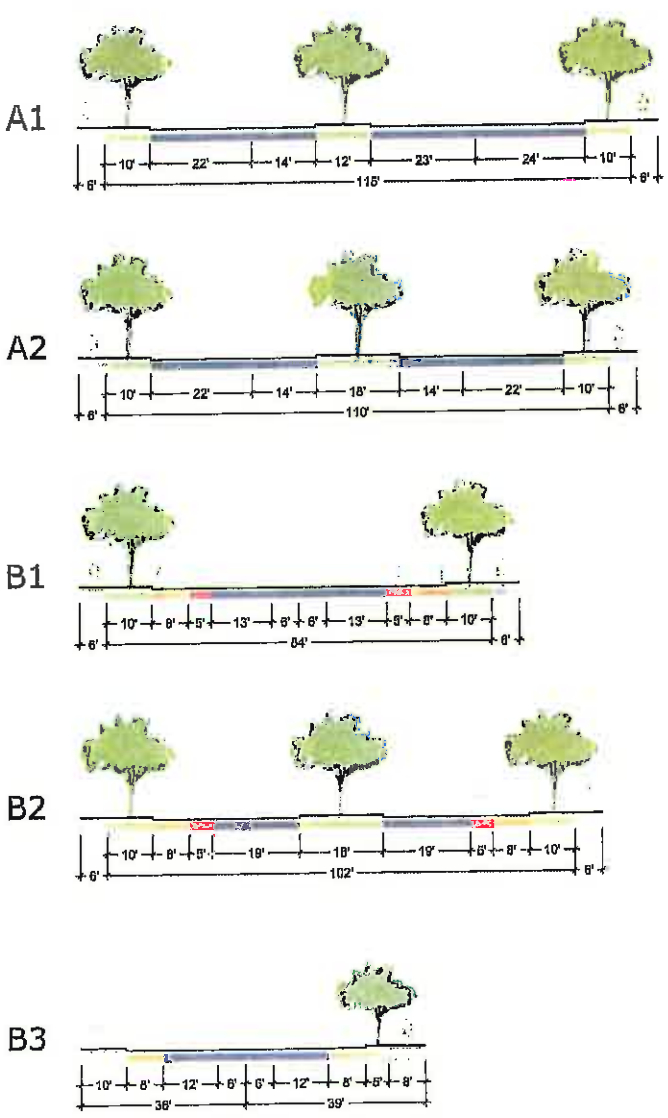


Figure 57a . Typical Street Sections A to D

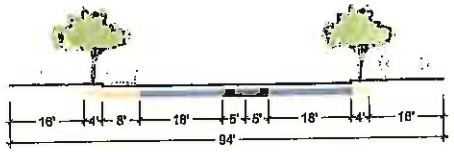
c) On the Strategic Plan Oak Avenue was assumed to take the role of transit corridor, nevertheless, in the current Plan, the role of **transit and main vehicular corridor** is transferred to School Avenue (east-west) and Burke Street (north-south). With a typical right-of-way of 66 feet, these vehicular spines are proposed with three configurations as shown in sections F1, F2 and F3. Oak avenue in the Plan, due to the limitations dictated by the Union Pacific Railroad that runs through its center, will function as a local street with an emphasis on pedestrian access (wide sidewalks, see Figure 58).

d) Local streets found in the Plan area are typically 66-foot right-of-way, with 46-foot curb to curb width. Several variations of stripping plans are proposed for local streets (street types E, G, H).

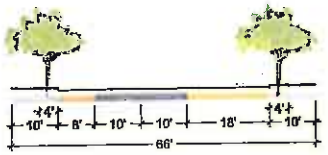
TYPICAL STREET SECTIONS

*** For further details on the street design for East Downtown Visalia, refer to Appendix 3, Circulation component, Exhibits 1 and 2, and Figures 1 to 8.**

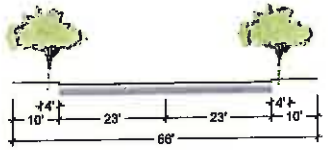
E



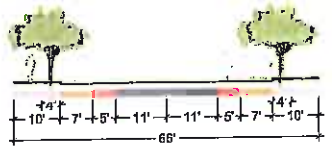
F1



F2

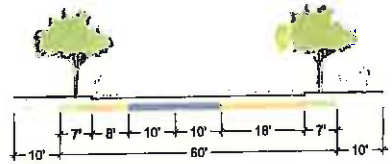


F3

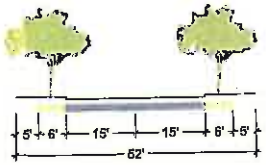


G1

G2



H1



H2

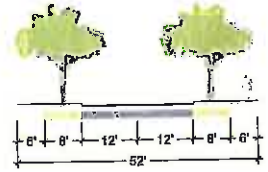


Figure 57b . Typical Street Sections E to H

TYPICAL SIDEWALK SECTIONS KEY

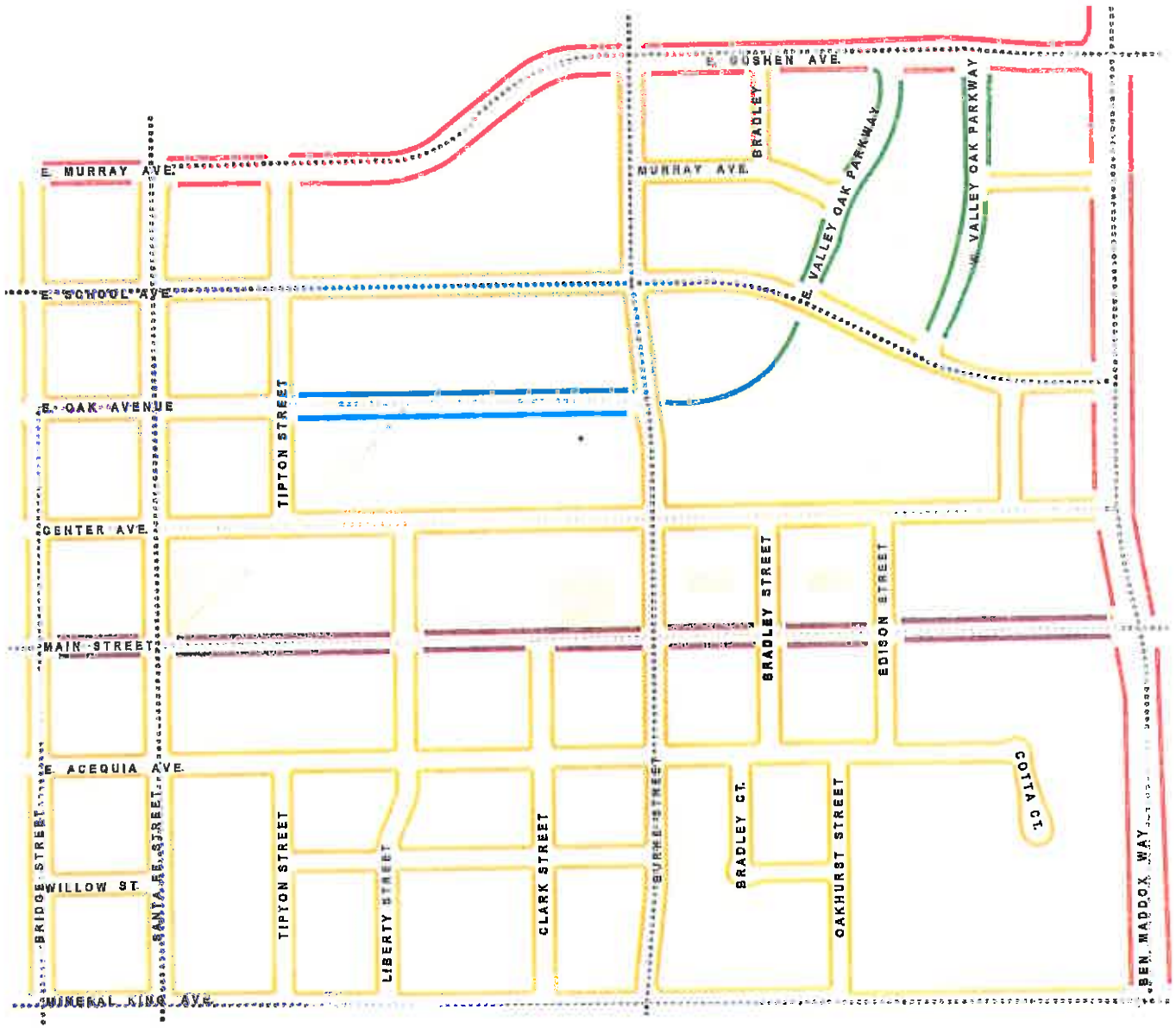


Figure 58 . Typical Sidewalk Section Key Map

Five typical sidewalks are proposed for the East Downtown Visalia area.

The most common sidewalk is 10 feet wide, with a walkway width of 6 feet and an average of 4 feet for planing strips or tree wells.

Main Street is proposed with a 13-foot sidewalk to provide area for cafe seating and comfortable strolling along street-front commercial uses. The additional 3 feet are achieved by increasing the existing right-of-way. As with the street design, the City of Visalia will determine on a case by case basis, where the additional 3 feet are available.

Legend

- 10 ft. Sidewalk
- 13 ft. Sidewalk
- 16 ft. Sidewalk
- 17 ft. Sidewalk
- 20 ft. Sidewalk

TYPICAL SIDEWALK SECTIONS

10 ft
Typical

13 ft
Main Street

16 ft
Oak Avenue
Large Peripheral Avenues

17 ft
Valley Oak Parkway

20 ft
Oak Avenue

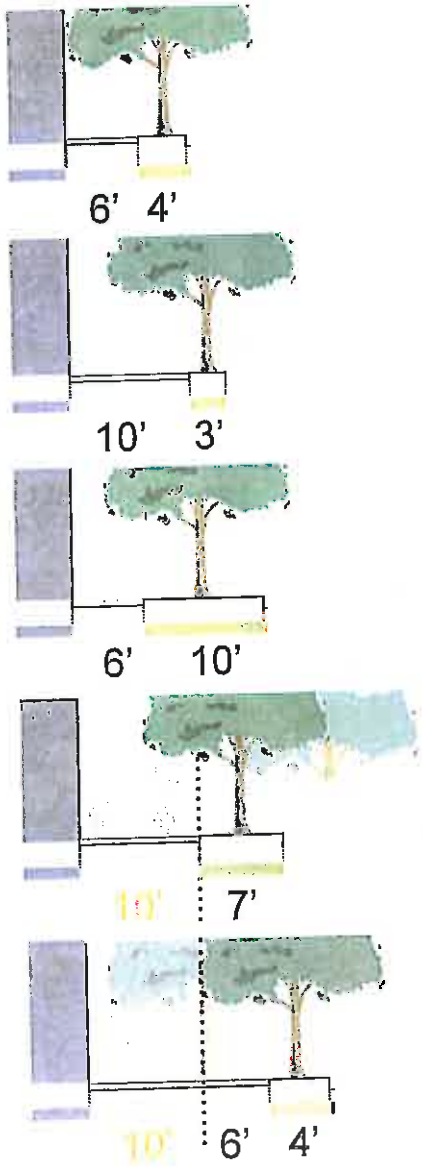


Figure 59 . Typical Sidewalk Sections

A 16-foot sidewalk is proposed on the peripheral thoroughfares. Six additional feet are included as a required setback that could be used to increase the size of the edge planter, forming a green buffer against these heavier-traffic streets.

Along the newly created parkways, the proposed sidewalk is at least 17 feet wide. A 10-foot easement or setback is proposed to create a generous pedestrian area along the street. Potential Class I bike lanes could be included in this sidewalk. Detailed design is recommended to make this determination.

Finally, the sidewalks on Oak Avenue between Tipton and Burke (Civic Center blocks) is proposed with a minimum width of 20 feet, including a large setback for additional planting and walking areas.

STREETSCAPE CONDITIONS

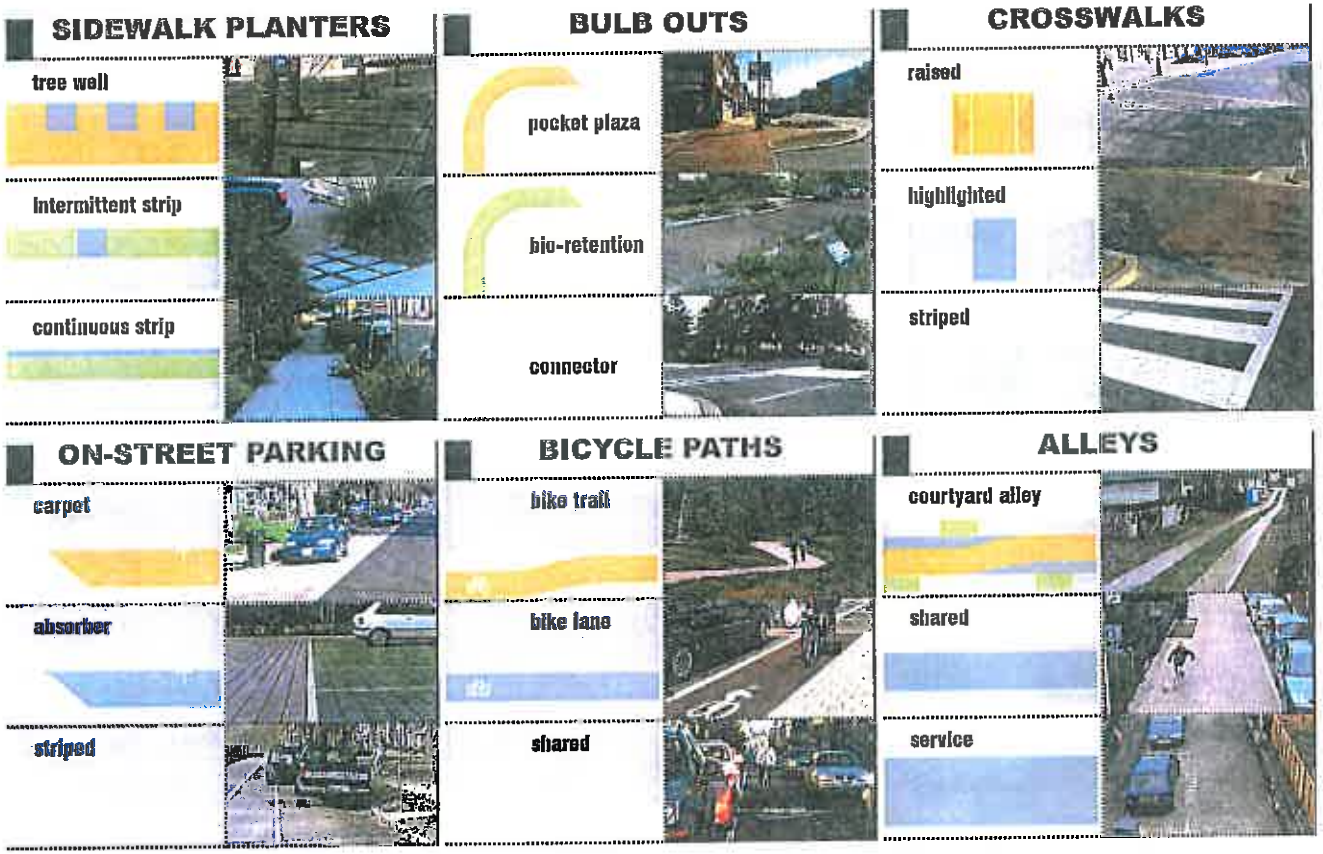


Figure 60 . Streetscape Conditions Menu

Streetscape design in East Downtown Visalia will play an important role for the creation of character, hierarchy, and potential low impact design interventions.

The development of a streetscape strategy began with the identification of six streetscape scope zones where improvements could be implemented. The scope zones include: sidewalk planters, bulb-outs, crosswalks, on-street parking areas, bicycle paths, and mid-block alleys.

Each one of the scope zones could be designed with three approaches or **streetscape conditions**, as shown in Figure 60 and described in the following pages.

SIDEWALK PLANTERS

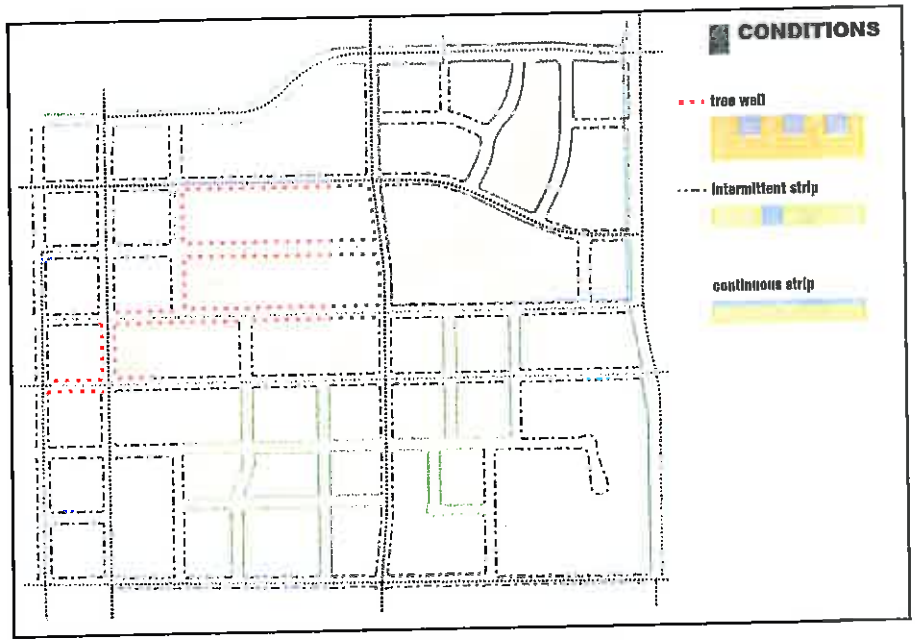


Figure 61 . Sidewalk Planter Conditions

The three possible sidewalk planter conditions recommended for East Downtown Visalia are 1) tree well, 2) intermittent strip, and 3) continuous strip. The **tree well condition** is recommended on the Civic Center block area, where a larger walkable area is beneficial. Tree grates and special paving could provide distinct sidewalk character. The **intermittent strip condition** is suggested for most of the commercial streets and main circulation arteries. Strips could be planted to form storm water detention areas, or paved with gravel or decomposed granite as a permeable and softer alternative to the tree well condition. Finally, the **continuous strip condition** is recommended for smaller local streets and the large thoroughfares where on-street parking in not required. This condition allows for the largest habitat/absorption area possible.

BULB-OUTS

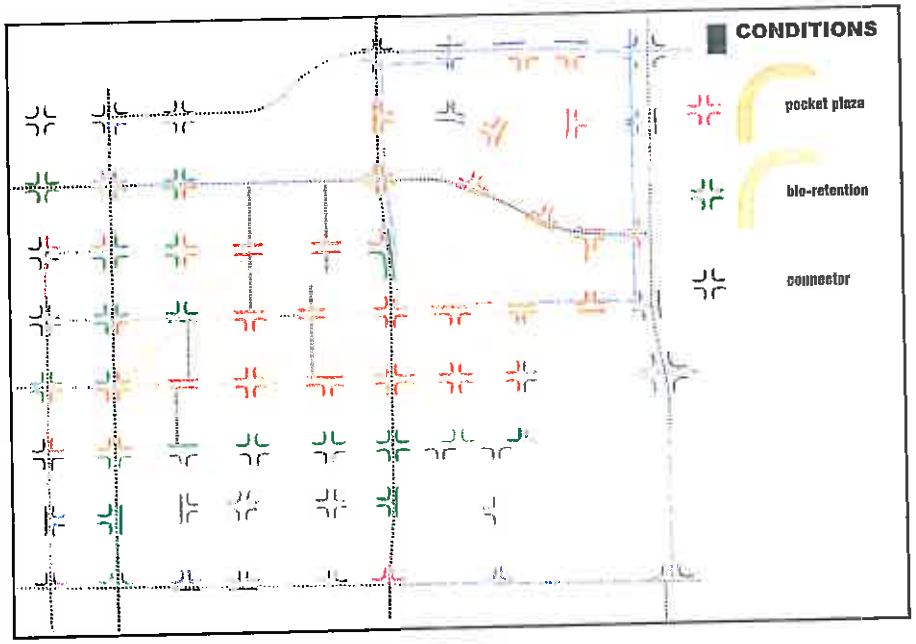


Figure 62 . Bulb-Out Conditions

Bulb-outs are recommended for all intersections in the study area. Some corners with right-turn lanes will not be able to accommodate bulb-outs, so site-specific design is required to determine feasibility of this proposal. Three conditions are recommended: 1) **pocket plaza bulb-outs**, primarily special paving to highlight character and allow some public programs near the Civic Center; 2) **bio-retention bulb-outs** are extended planter zones, where mostly planting will be proposed, this condition is recommended in local streets with residential uses; and lastly 3) **connector bulb-outs** are the typical concrete bulb-outs provided to reduce crosswalk distance, these bulb-outs are suggested for existing areas where smaller or less intrusive bulb-outs are appropriate.

CROSSWALK

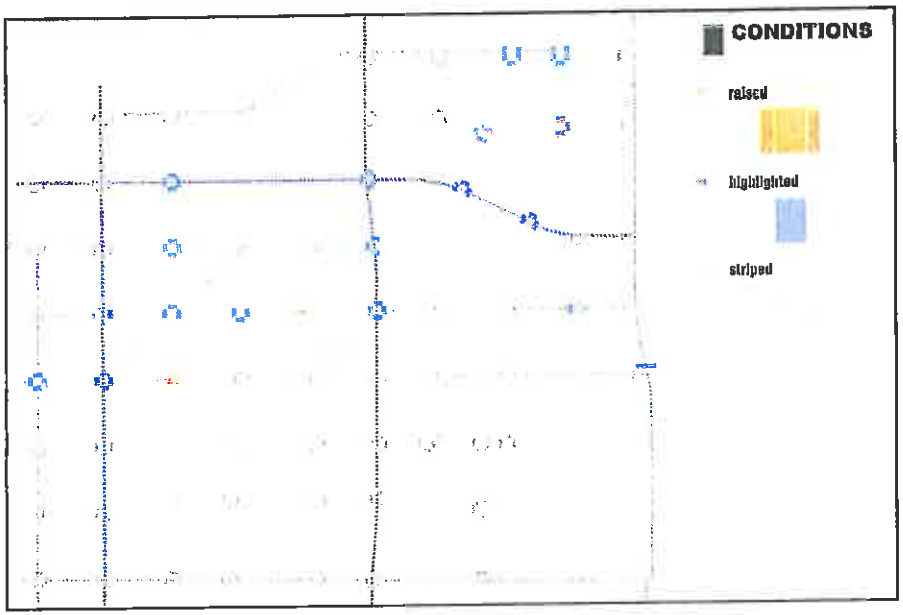


Figure 63 . Crosswalk Conditions

Raised, Highlighted and Striped are the three conditions proposed for crosswalks in East Downtown. The **raised condition** consists on creating a crosswalk at the same level of the sidewalks, requiring vehicles to slow down and go over the pedestrian crosswalk as if it was a speed-bump. Raised crosswalks are recommended for mid-block crossings, since they are the safest condition for pedestrians. Limitations due to the railroad on Oak Avenue might prevent the implementation of a raised crosswalk. In this case, options like vibrators and special paving materials could be considered. The **highlighted** condition is suggested for main crossings where a special character is to be achieved. These crosswalks include all the corners adjacent to the core parks. **Striped** crosswalks are the City standard type crossings, including existing ones.

ON-STREET PARKING

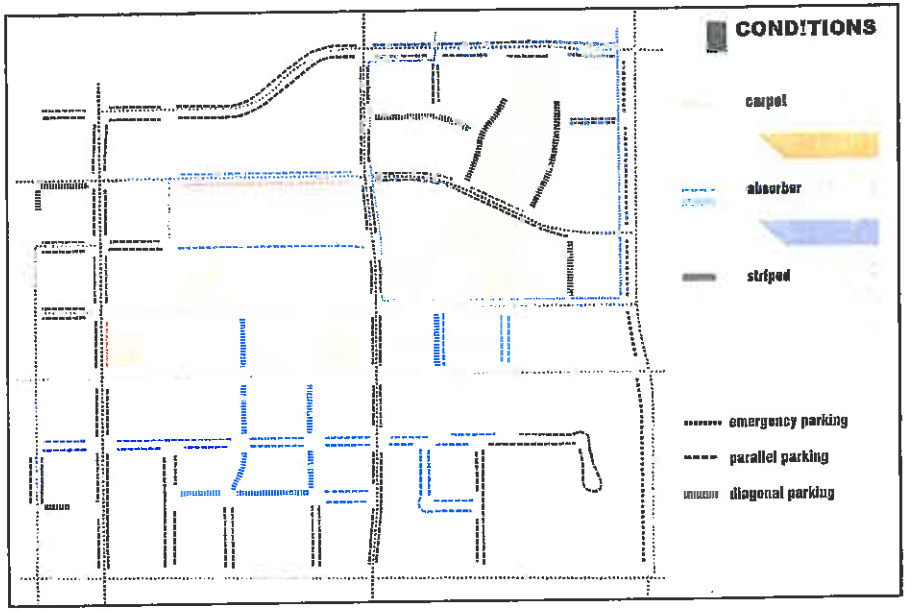


Figure 64 . On-Street Parking Conditions

On-street parking areas are typically ignored when designing streetscape. In the case of East Downtown, the recommendation is to take advantage of these necessary zones to increase the public realm character or on-site permeability. Two special conditions are suggested in addition to the standard **striped** parking zone: carpet and absorber. The **carpet condition**, which consists on paving the parking zone with special materials, is recommended only on the Civic Center drop-off area along School Avenue, and on the street adjacent to the proposed Market Hall Plaza. On the other hand, the **absorber condition**, which includes paving the parking zones with permeable materials, could be used in some of the new local streets in the residential areas, or on the parking areas along the Civic Center blocks to demonstrate the City's commitment to sustainability.

BICYCLE PATH

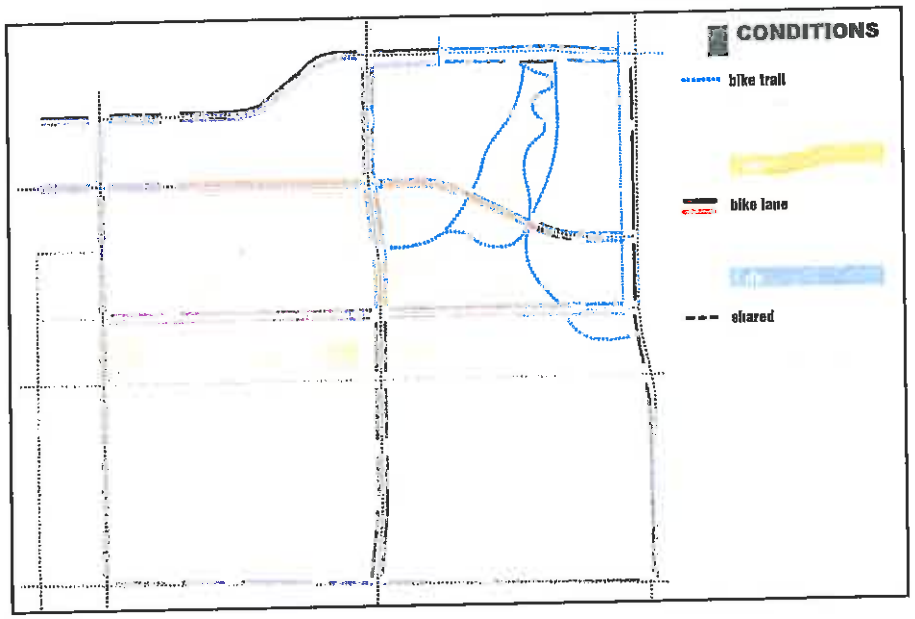


Figure 65 . Bicycle Path Conditions

Similar to the on-street parking, opportunities exist in the development of bike lanes and paths to provide special paving that builds character or permeability. The three conditions proposed for the study area include shared, bike lane (with special or standard paving materials), and bike trails (only possible in the parks). Special paving for **bike lanes** along the parkways (School Avenue between Burke and Ben Maddox), as well as Burke Street between Center and School, are suggested to highlight the importance of the area. Potentially coarser paving in these areas could also encourage bicyclists to slow down in areas where more pedestrians are assumed to be. All **bike trails** in parks are recommended with exposed aggregate concrete, scored to allow partial percolation. Per Visalia's Bikeways Plan, Santa Fe is proposed as a **shared** street.

ALLEY

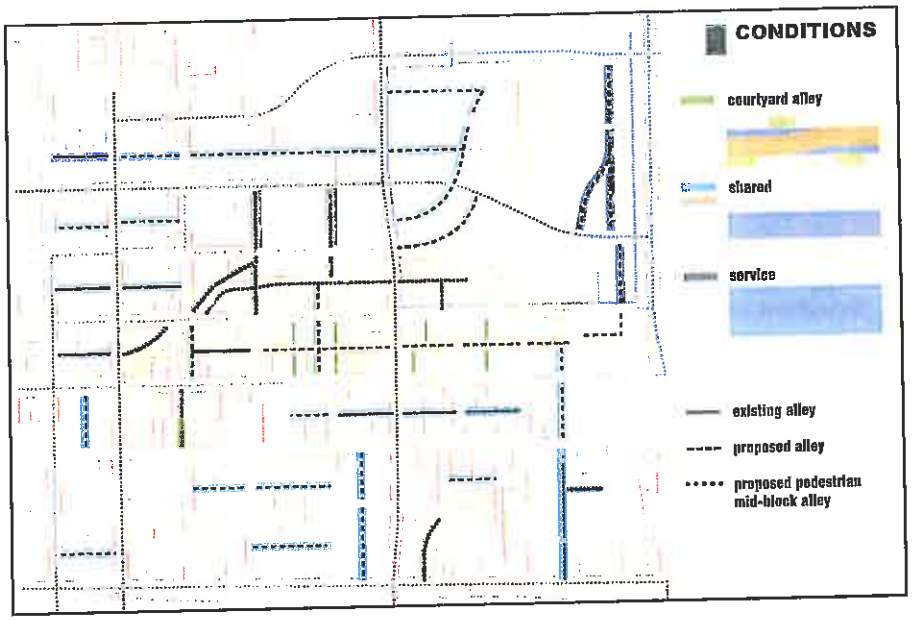


Figure 66 . Alley Conditions

Alleys are an important ingredient in the development of a pedestrian-oriented public realm, since they make pedestrian circulation easier (by providing short-cuts), and encourage informal socialization among neighbors. In East Downtown, the proposal is to include three alley conditions: 1) **courtyard alleys**, in new development blocks, adjacent to parks or other public amenities, where planting zones, special paving, and service zones could be integrated; 2) **shared alleys**, where service and pedestrian activities can also coexist but with more modest materials and features, are recommended for all mixed-use areas with commercial and residential emphasis; and finally 3) **service only alleys**, are proposed on parcels for office land use, where other alley conditions may result impractical.

STREETSCAPE LOW IMPACT DESIGN OPPORTUNITIES

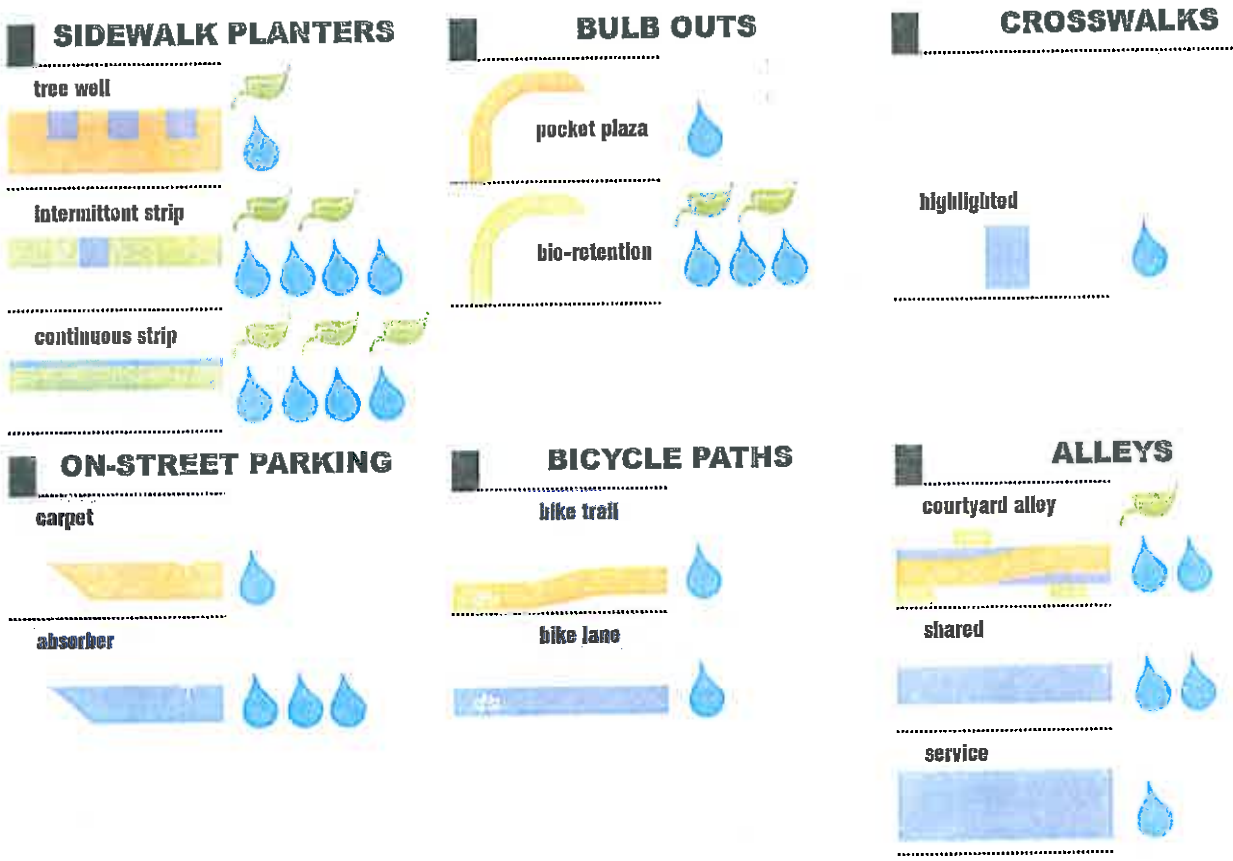


Figure 67 . Streetscape LID Opportunities

The advantage of the diverse number of streetscape conditions is that they allow for different areas to take different characters or to emphasize particular goals.

The conditions highlighted in Figure 67 represent the ones with the highest potential for achieving better low impact design implementation. The blue "drops" indicate areas of absorption in a scale of 1 to 4 (4 being the most absorbent condition). Like-wise, the green "leaves" indicate conditions where creation of habitat is possible, also represented in a scale of 1 to 4.

STREETSCAPE CHARACTER/PROGRAM OPPORTUNITIES

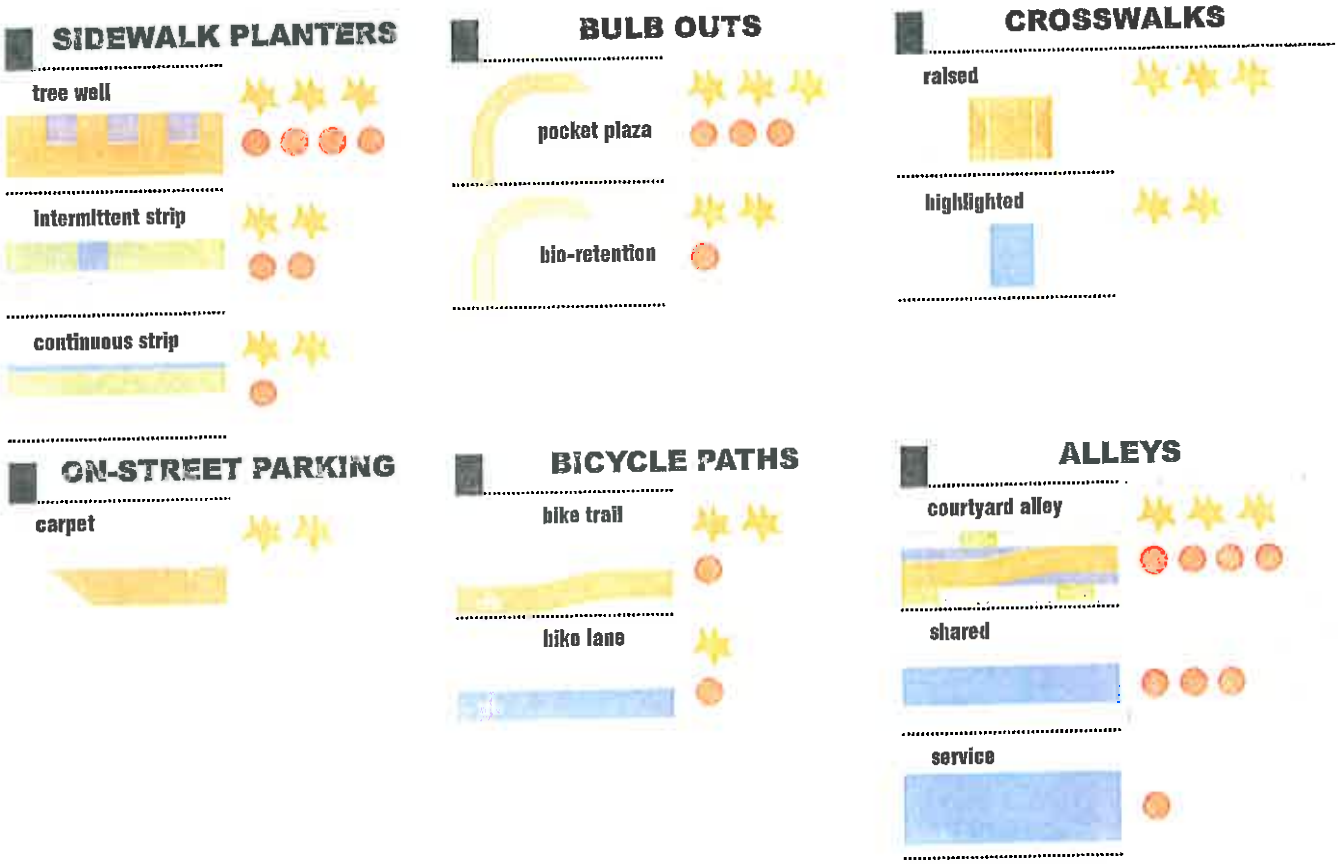


Figure 68 . Streetscape Character and Program Opportunities

While some conditions are better for low impact design, others are recommended for providing program opportunities, or because their implementation can help build a distinct character.

The conditions checked on Figure 68 indicate program potential (orange dots), and character-building opportunities (yellow stars). In addition to special paving materials, character can be achieved by the use of special site features (furnishings, lighting, signage, public art), and the highlighted conditions on this diagram can accommodate these interventions.

STREETSCAPE PAVING STRATEGY

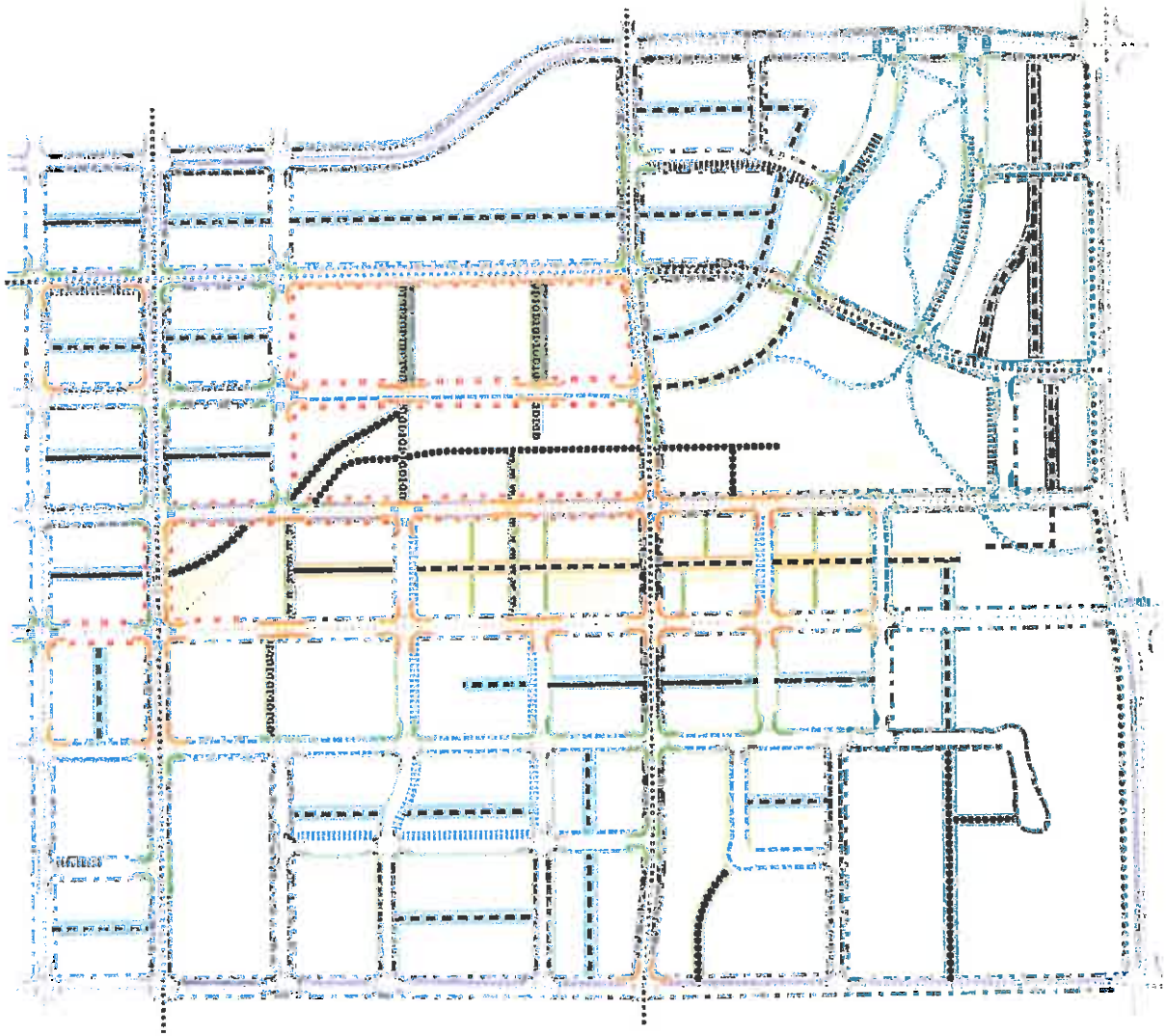


Figure 69 . Streetscape Paving Strategy

The summary of streetscape conditions shown in Figures 61 to 66 are combined herein to form the streetscape paving strategy. The review of this strategy reveals that a more formal and character/ program focus is applied to streetscapes adjacent to the Civic Center, while a softer LID focus is proposed for areas adjacent to the Central Park and the mixed-use areas with a residential emphasis.

STREETSCAPE PLANTING STRATEGY

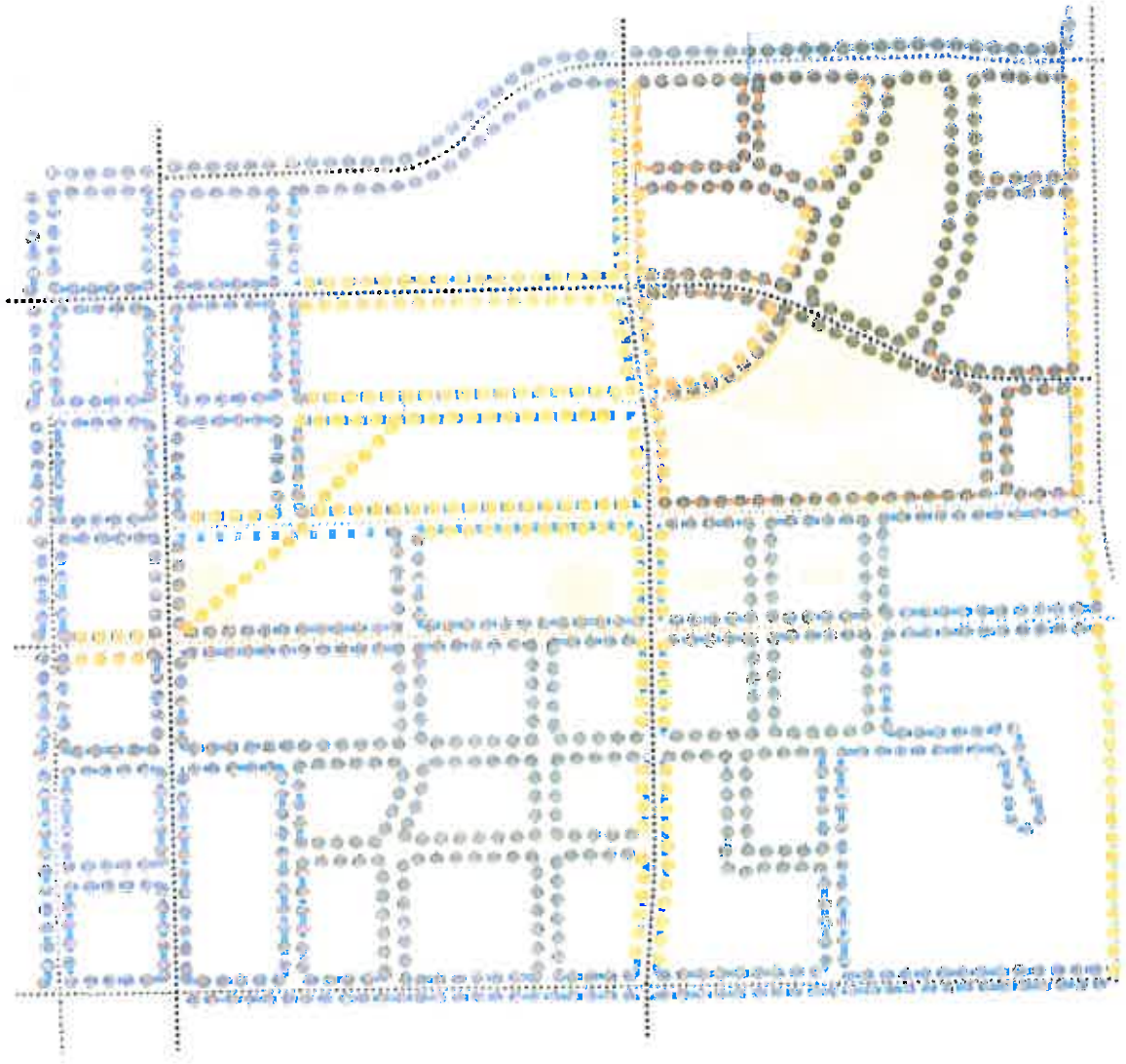


Figure 70 . Streetscape Planting Strategy

The canopy layer on the planting strategy responds to the street hierarchy, suggesting two main types of trees: large native trees that provide shade, and non-native species (such as the Pear Tree) that have cultural or social relevance in Visalia, and that tie the new area with existing neighborhoods.

The groundcover layer in the diagram of Figure 70 respond to the water requirements of planting, per the LID or standard conditions suggested in previous pages.

Refer to Appendix 7 for the planting list.

STREETSCAPE DESIGN GUIDELINES

Per the paving and planting diagrams of the previous pages, the materials recommended for streetscapes on the East Downtown Visalia project respond to character zones, assumed type of traffic and users, and ability to implement low impact design recommendations. The goal is to provide a consistent palette with zones/elements of interest.

PAVING

Recommended materials include:

- Standard Concrete: for typical sidewalks
- Stone or Special Unit Pavers: for accent details within special character zones (ie. Civic Center, entry Plaza, etc.)
- Porous Paving: for all sidewalks and other areas where water absorption is possible/recommended

PLANTING

Recommended plant species will include (refer to Appendix 7 for expanded plant list):

- Flowering Pear Tree: as an accent street tree and along both sides of Oak Avenue, connecting East Downtown's character with the existing streetscape of Main Street
- Native Shade Trees: large and medium species to be used in all streetscapes; larger shade trees to be planted along Valley Oak Parkways
- Native Understory: for medians and planters; species to respond to water availability or lack thereof

SITE FURNISHINGS AND SPECIAL FEATURES

Recommended elements include:

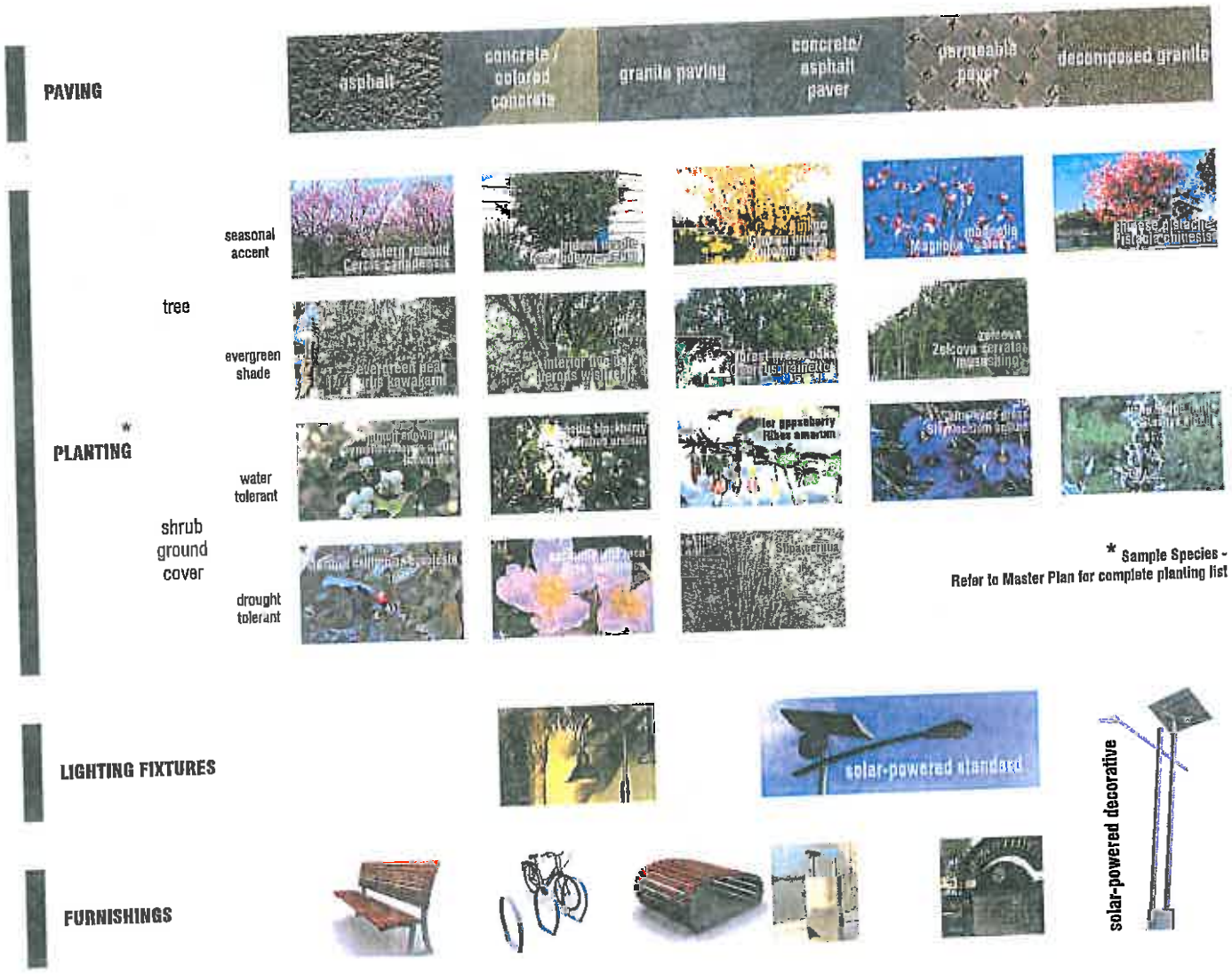
- Bike Racks: adjacent to all public amenities, stainless steel, simple design
- Tree Grates: to increase the "walkable" area on "tree well" sidewalk types, metal tree grates are recommended
- Seating: consistent, standard bench type to be used in all areas of East Downtown

LIGHTING

Recommended materials include:

- Solar Lights: decorative type for plazas and City Hall entry courts, minimum; all new streets to use solar-powered standard
- Existing Street Lights: preserve; ultimately the City may choose to convert City standards to solar-powered fixtures
- Historic-looking Fixture: the existing fixtures installed around the recently constructed Transit Center shall remain and highlight the character of that sub-area of the East Downtown area

STREETSCAPE DESIGN GUIDELINES IMAGERY



INFRASTRUCTURE MASTER PLAN

As part of this Master Plan, a series of reports, studies and memoranda were prepared by the consultant team engineers. This sub-section of the report provides a brief description of design criteria and improvements recommended for the development of East Downtown Visalia.

INFRASTRUCTURE

Wet Utilities

- Storm Sewer
- Sanitary Sewer
- Water System

Dry Utilities

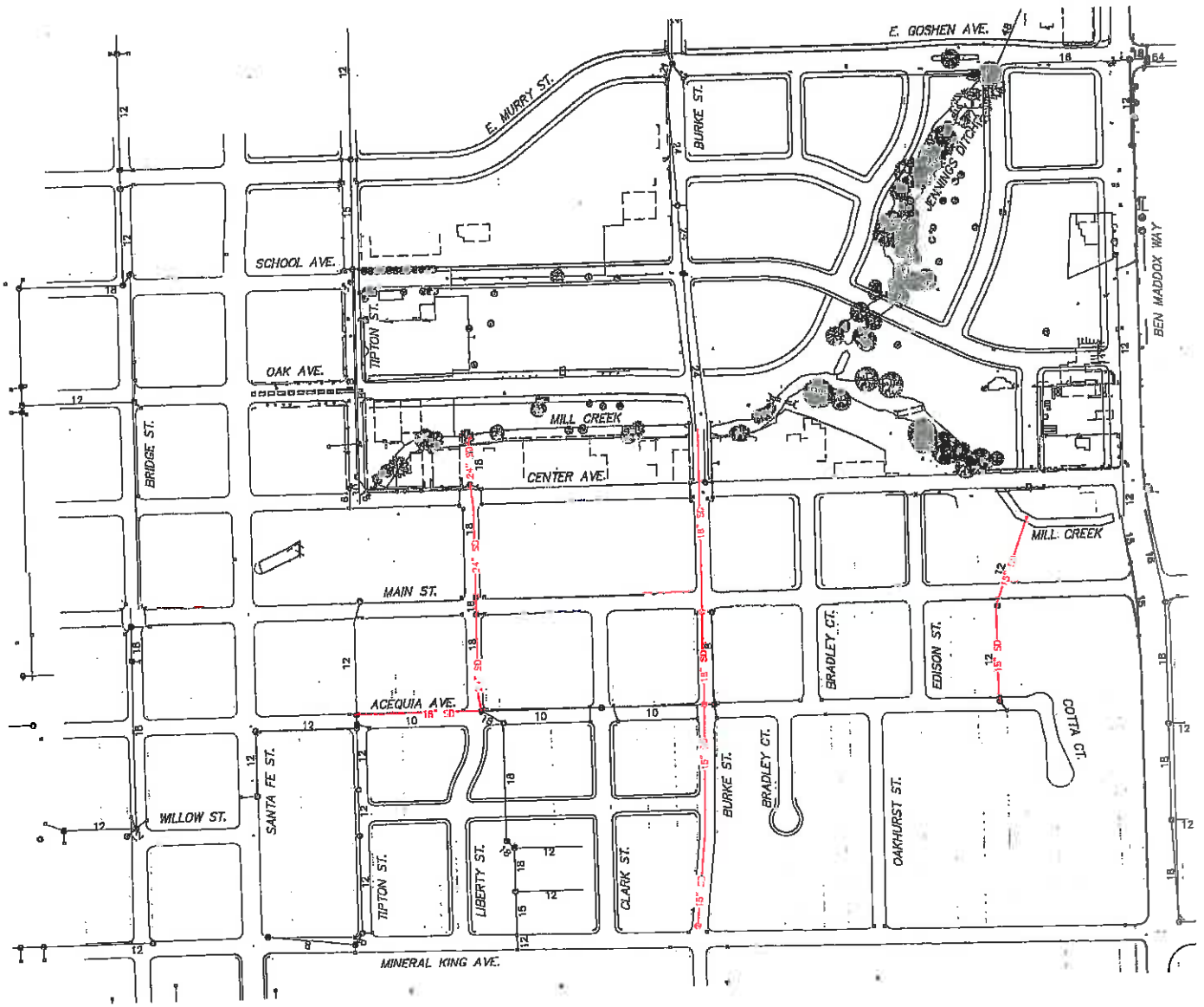
- Electrical
- Telephone
- Natural Gas

INFRASTRUCTURE MASTER PLAN

WET UTILITIES

The Master Plan for wet utilities was developed by Provost and Pritchard Engineering. Wet utilities include storm drain, potable water and sewage. Detailed planning and design is included in Appendix 3 of this document.

PROPOSED STORM DRAIN SYSTEM



STORM DRAIN SYSTEM

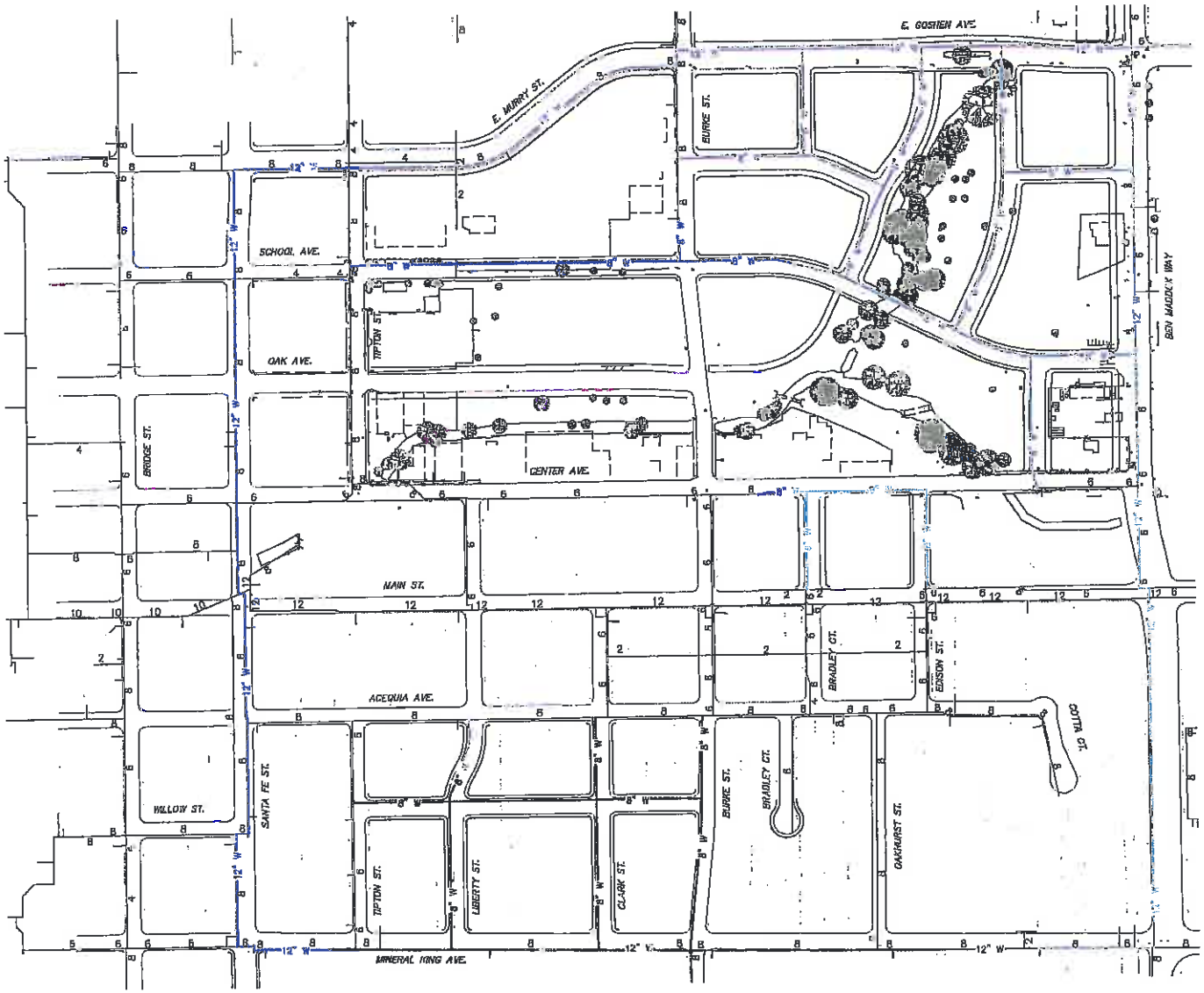
Refer to Appendix 3, pages A3-8 to A3-10 for storm drain master plan.

Legend

- EXISTING CATCH BASIN
- EXISTING STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN MANHOLE
- 12 EXISTING STORM LINE
- 12" PROPOSED STORM LINE

Figure 71 . Proposed Storm Drain System Plan

PROPOSED WATER SYSTEM



WATER SYSTEM

Refer to Appendix 3, pages A3-12 to A3-14 for water system master plan.

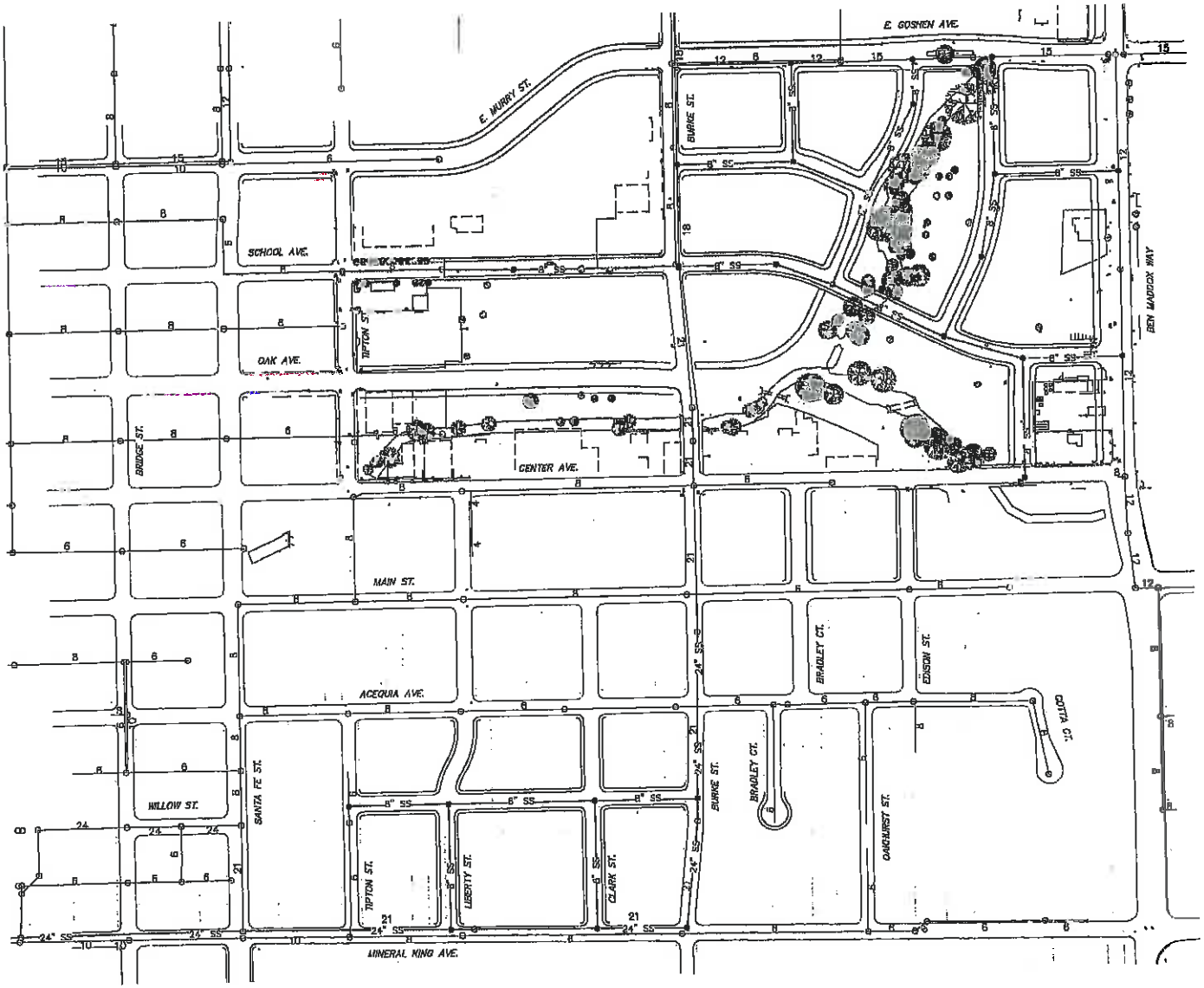
Legend

EXISTING WATER LINE

PROPOSED WATER LINE

Figure 72 . Proposed Water System Plan

PROPOSED SANITARY SEWER SYSTEM



SANITARY SEWER SYSTEM

Refer to Appendix 3, pages A3-10 to A3-12 for sanitary sewer master plan.

Legend

- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- 12 — EXISTING SANITARY SEWER
- 12" SS — PROPOSED SANITARY SEWER

Figure 73 . Proposed Sanitary Sewer System Plan

INFRASTRUCTURE MASTER PLAN

DRY UTILITIES

Master planning for dry utilities was developed by Moffatt and Nichol Engineers. Dry utilities include electrical, gas and telecommunications. Design criteria and general parameters for the design of additional dry utilities infrastructure is included in Appendix 4 of this document, the summary provided in the following pages is for quick reference only.

ELECTRICAL SYSTEM

Electrical service in the City of Visalia is provided by Southern California Edison (SCE). SCE is governed by requirements of the Public Utilities Commission and per such requirements, SCE most provide electrical service to the East Downtown development if service is requested. Based on the electrical loads required, the location and capacity of their surrounding existing facilities, and the layout of the development, SCE will determine the alignments of electrical lines which will serve the site.

The alignment shown on Figure 74 is one possible layout of the SCE distribution network, subject to their approval. Most likely, SCE will serve the site with a 12K distribution system.

PROPOSED ELECTRICAL, GAS, AND TELECOMMUNICATION SYSTEMS

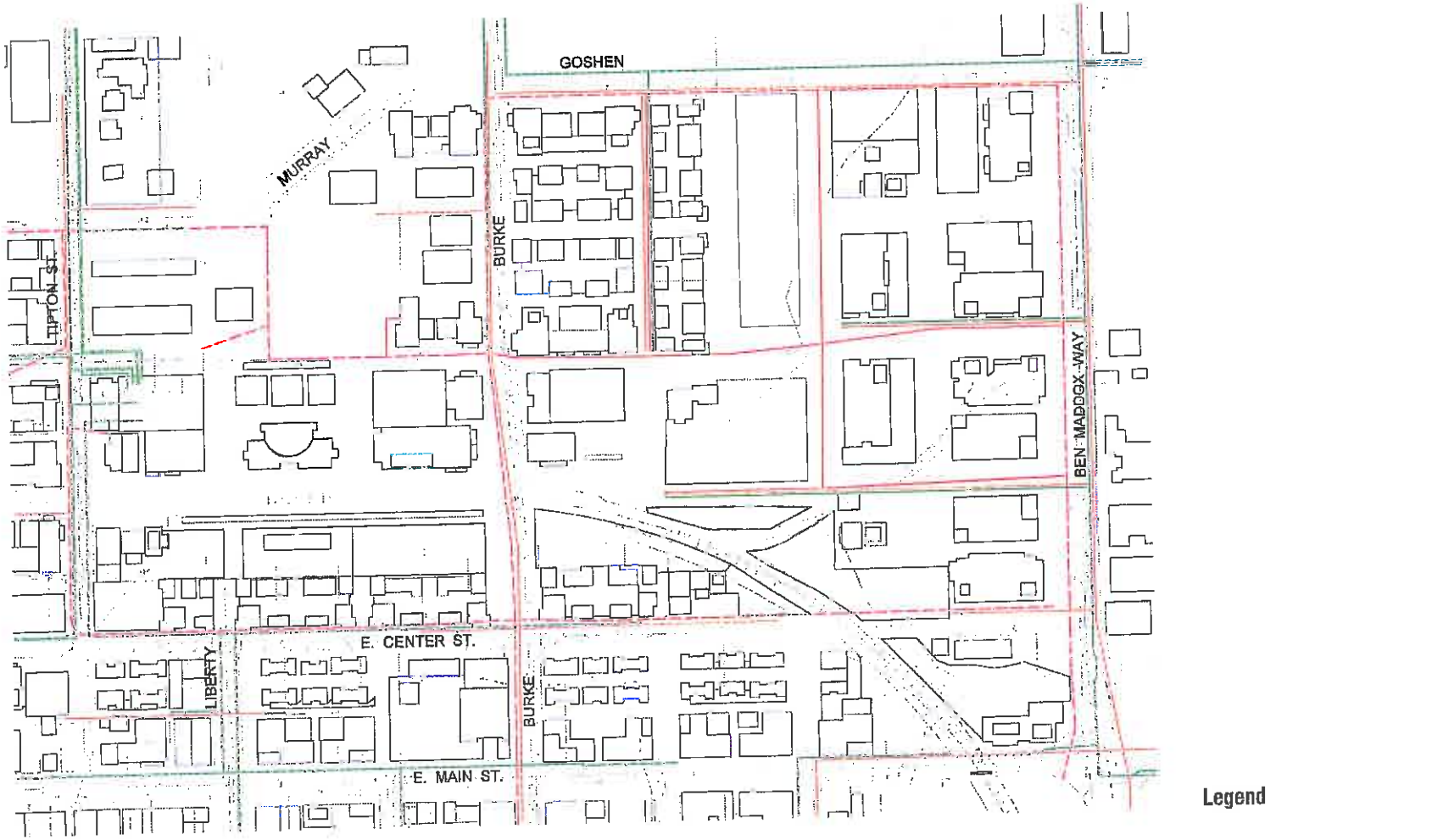


Figure 74 . Proposed Dry Utilities Plan: Electrical, Gas and Telecommunications

DRY UTILITIES

NATURAL GAS SYSTEM

Natural gas in Visalia is provided by Socal Natural Gas / Sempra Energy. Existing records indicate that transmission lines around the project vicinity deliver natural gas to the surrounding properties. There are no known records of natural gas lines within the site.

Based on assumed demand and an effort to deliver 2 psig of natural gas to each user will determine the detail design of the gas network. The gas plan shown in Figure 74 represents the shortest, most practical and available routes to provide one service lateral to each potential and existing building within the study area.

TELECOMMUNICATIONS SYSTEM

There are multiple telecommunications providers in the City of Visalia. The infrastructure master plan included in Appendix 4 outlines the conceptual planning and routing methods that should be adhered to with respect to communications cabling and routing standards.