V. ALTERNATIVES

The *CEQA Guidelines* require the analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.[1] CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The proposed project has been described and analyzed in the previous chapters, with an emphasis on significant impacts resulting from the project and recommended mitigation measures to avoid these impacts. The following discussion is intended to inform the public and decision-makers of the relative impacts of four potentially feasible alternatives to the proposed project. A discussion of the environmentally superior alternative is also provided.

The following project objectives were initially listed in Chapter III, Project Description of this EIR and are repeated here to inform this evaluation of project alternatives:

- To subdivide the project site into 80 developable lots;
- To develop the site for limited industrial, commercial, and open space uses;
- To provide employment and revenue opportunities for Benicia;
- Provide an open space buffer between the developed part of the site and Lake Herman Road; and
- To develop the site in a manner consistent with the City General Plan and Zoning Ordinance.

The four alternatives to the proposed project discussed in this chapter include the following:

- The **No Project alternative** assumes that the project would not be developed within the short term; however, it would remain under its existing General Plan designations (General Commercial and Limited Industrial), which would allow for future development.
- The **Waterway Preservation alternative** would preserve a 200-foot buffer on each side of the creeks and drainages within the project site, and includes approximately 34 acres of commercial uses, 170 acres of industrial uses, 10 acres of public facilities, and 313 acres of open space/landscaped area.
- The **Hillside/Upland Preservation alternative** would reduce grading on the site by up to 70 percent by preserving the prominent hilltops adjacent to Lake Herman Road. In addition, 100-foot buffer zones would be set aside along all drainages within the site. Development as part of this alternative would include 33 acres of commercial uses; 167 acres of industrial uses; 10 acres of public facilities; and 317 acres of open space/landscaped area.

[1] *CEQA Guidelines*, 2006. Section 15126.6.

- The **Mixed-Use alternative** would result in the development of housing on the site, in addition to commercial and industrial uses. Housing would be located within walking distance of the commercial and industrial uses in the site. This alternative includes: approximately 63 acres of high density residential uses; 16 acres of medium density residential uses; 27 acres of commercial uses; 171 acres of industrial uses; 10 acres of public facilities; and 240 acres of open space/landscaped area.

All acreages and buffer zone distances used in this analysis are estimates, and are inclusive of roads, sidewalks, trails, infrastructure, landscaping, and other improvements. Actual acreages and buffer areas could vary slightly from these estimates based on access requirements, lot configuration, and the preservation of landscape features, such as trees.

Following is a discussion of each alternative, and an analysis of the anticipated environmental impacts of each alternative. This analysis compares the anticipated impacts of each alternative to the impacts associated with the proposed project; the discussion includes a determination as to whether or not each alternative would reduce, eliminate, or create new significant impacts.

A. NO PROJECT ALTERNATIVE

1. Principal Characteristics

The No Project alternative assumes that the project site would not be subject to immediate development, and would remain generally in its existing condition. No grading, road building, or construction would take place on the site. In addition, the drainages, wetlands, trees, and abandoned ranch complex on the site would remain. The No Project alternative would also result in the short-term preservation of the site's topography. It is possible that grazing activities could continue in the area.

The General Plan designation of the site would remain as General Commercial and Limited Industrial under the alternative. These designations would allow for future development on the project site, potentially in the form of a project similar to the one currently proposed. The No Project alternative would achieve none of the desired objectives of the project. The project site would not be subdivided into lots to permit the development of business park uses, no employment and revenue-generating uses would be built on the site, no permanent open space buffer would be designated adjacent to Lake Herman Road, and the site would remain open space, which would be inconsistent over the long run with the current General Plan designation of the site for general commercial and limited industrial uses.

2. Analysis of the No Project Alternative

The No Project alternative is evaluated for all the environmental topics analyzed in this EIR.

a. Land Use and Planning Policy. The No Project alternative would result in no land use changes to the project site. The site would continue to contain open space, drainages, and wetlands, and could be used for grazing. No Project alternative would not realize the land uses for the site planned in the General Plan (General Commercial and Limited Industrial). The alternative would also not result in significant conflicts with the numerous General Plan policies adopted for the purposes of environmental protection, including policies relating to the preservation of drainages, wetlands, and slopes.

b. Population, Employment and Housing. The alternative would result in no commercial, industrial, or residential development on the site, and would not extend infrastructure into the site. Therefore, the No Project alternative would not directly or indirectly induce population growth on the site. Like the proposed project, the alternative would not displace existing housing or residents.

c. Geology, Soils and Seismicity. Under the No Project alternative, the project site would continue to be subject to seismic hazards, landslides, and soil deformation and movement. However, the alternative would not expose new buildings to these hazards or substantially increase the number of people exposed to these hazards.

d. Hydrology and Water Quality. The No Project alternative would avoid nearly all the hydrology and water quality impacts that would result from the proposed project. The alternative would not result in construction activities on the site and would not result in soil erosion, the release of construction-related hazardous materials, or the emission of other pollutants that could degrade water quality. Under the No Project alternative, all drainages and wetlands would be maintained on-site, and the site would continue to be covered with pervious surfaces. Therefore, the alternative would not generate significant downstream flooding impacts or change the drainage pattern of the site.

e. Hazards and Hazardous Materials. The No Project alternative would not result in the demolition of buildings within the site. Therefore, substantial quantities of lead or asbestos would not be released into the environment (although small quantities of these materials could be released as the abandoned farm buildings on the site continue to deteriorate). The alternative would also not result in development on the site, and would not expose increased numbers of people to wildfire hazards. In addition, the alternative would not expose an increased on-site population to other hazards that could occur on the site, including unexploded ordnance.

f. Biological Resources. The alternative, which would maintain existing landscape features on the project site, would avoid all the significant impacts of the project on biological resources. The No Project alternative would retain sensitive plant and animal communities, including riparian zones and wetlands, and would not diminish the habitat of protected plant and animal species, including habitat available in the abandoned farm buildings on-site.

g. Transportation and Circulation. The No Project alternative would result in only a minor number of new trips to the project site (these trips would be associated mainly with grazing activities). Therefore, the alternative would avoid all the significant transportation-related impacts of the project, including unacceptable levels of service at intersections throughout Benicia and congestion on the regional freeway system. The alternative also would not encourage the use of alternative modes of transportation, as mandated by the General Plan.

h. Air Quality. The No Project alternative would not result in grading activities on the site, which would otherwise cause substantial particulate matter emissions. In addition, the alternative would not generate construction-related or operational period vehicle trips (beyond the few trips associated with the resumption of grazing activities on the site). Therefore, the alternative would avoid the significant air quality impacts associated with the proposed project, namely substantial emissions of reactive organic gases, nitrogen oxides, and particulate matter.

i. Noise. The No Project alternative would not result in new construction or grading (and its associated noise). In addition, the alternative would not generate substantial new vehicle trips, which would otherwise increase noise levels in the vicinity of the project site, including area roadways.

j. Visual Resources. The No Project alternative would not change existing land uses on the project site, or alter the visual character of the area. Under the alternative, the hillsides, creeks, wetlands, and vegetation in the site would remain intact. However, the landscape of the site could change due to other development proposals put forth under the site's General Commercial and Limited Industrial General Plan designations.

k. Cultural and Paleontological Resources. The No Project alternative would result in minimal ground disturbance on the project site. Therefore, the alternative is not expected to result in impacts to previously unidentified archaeological resources.

l. Public Services. Because the No Project alternative would not immediately result in business park development on the project site, it would not increase demand for public services, including police and fire services. Therefore, the alternative would not require the construction of new police and fire department facilities in order to maintain acceptable emergency response times.

m. Utilities. Because the project site would remain undeveloped under the No Project alternative, the alternative would not result in the extension of water and wastewater infrastructure to the project site or require the upgrading of existing infrastructure in the vicinity of the project site. In addition, the No Project alternative would not increase water and energy demand on the site. All the significant utilities impacts associated with the proposed project would be avoided by the alternative.

n. Urban Decay. Implementation of the No Project alternative, like the proposed project, would not result in urban decay. The alternative would also not realize some of the beneficial economic impacts of the project related to job creation, increased tax revenue in Benicia, and local economic growth.

B. WATERWAY PRESERVATION ALTERNATIVE

1. Principal Characteristics

Many of the impacts associated with the project are due to the culverting or filling-in of existing waterways on the project site. As discussed in Chapter III, the proposed project would preserve only one of the existing drainages on the site in its natural state, resulting in potential degradation of water quality, an increased risk of downstream flooding, loss of wetlands and sensitive habitat, and visual impacts. The natural storm water conveyance system of the site would be mostly replaced with an engineered infrastructure with ongoing maintenance costs and low habitat value. In addition, the removal of creeks would conflict with numerous General Plan policies, which seek to protect and restore natural drainages.

The Waterway Preservation alternative (Figure V-1), which would preserve a 200-foot buffer on each side of the creeks, drainages, swales, and other wetlands within the project site, would eliminate or substantially reduce almost all the project impacts associated with hydrology, water quality, flooding,

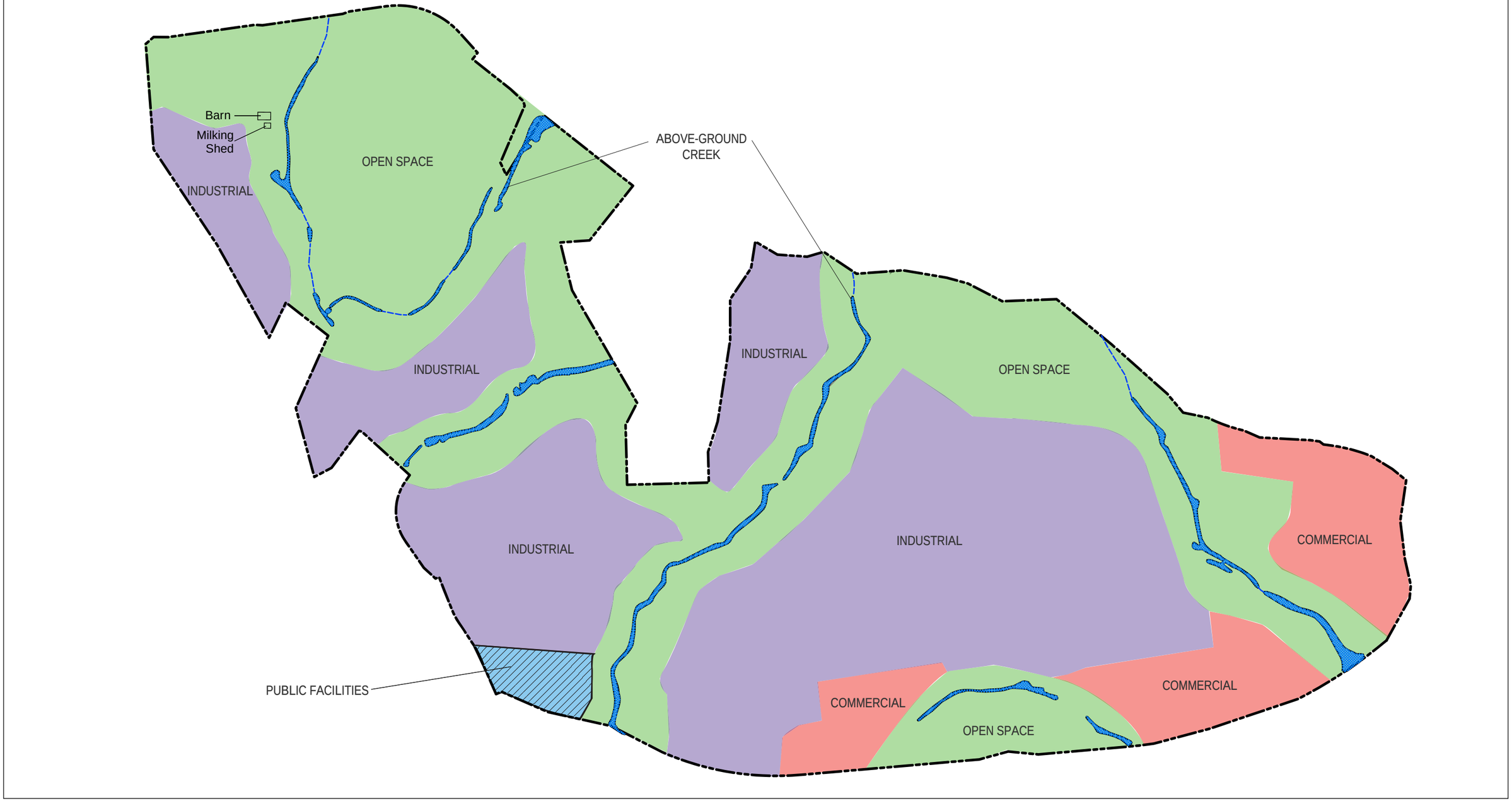

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FIGURE V-1

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Benicia Business Park EIR
Waterway Preservation Alternative

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and biological resources. Drainage buffers would also encompass the remnant farm buildings on-site, allowing them to be preserved if they contain significant bat or owl habitat.

The configuration of commercial and industrial land uses that would be developed as part of the alternative would be similar to the configuration proposed as part of the project: commercial uses would be clustered on the eastern end of the site near I-680 and industrial uses would stretch to the west. However, the Waterway Preservation alternative would include a longer frontage of commercial uses along East 2nd Street, and would require a General Plan amendment. Both commercial and industrial uses would be bisected by bands of open space, which could be used as part of a trail network if desired by the project sponsor. This mixture of commercial, industrial, and open space lands would also require creative lot configuration, and street patterns. The alternative would also include an approximately 10-acre parcel of land designated for public facilities (e.g., fire station, police station, and public works facilities).

The alternative includes the following land uses. Land used for roads and infrastructure would be incorporated into the listed acreages for the various land uses.

- 34 acres of commercial uses
- 170 acres of industrial uses
- 10 acres of public facilities
- 313 acres of open space/landscaped area

2. Analysis of Waterway Preservation Alternative

The Waterway Preservation alternative is evaluated below for all the topics analyzed in the EIR with the exception of: hazards and hazardous materials; cultural and paleontological resources; utilities; and urban decay. The impacts associated with these excluded topics would be very similar for all of the development alternatives (including the Waterway Preservation alternative), and almost the same as those that would result from implementation of the proposed project.

a. Land Use and Planning Policy. The Waterway Preservation alternative would result in the development of business park uses on the project site, similar to the proposed project. The alternative would be generally consistent with the General Plan and Zoning designations of the project site, although additional land along East 2nd Street would need to be designated for commercial uses. Compared to the proposed project, the alternative would be substantially more consistent with policies in the General Plan, specifically those that relate to preservation of wetlands, creeks, and associated plant and animal communities. Therefore, the Waterway Preservation alternative would not result in the significant policy inconsistency-related impacts that would result from the proposed project. In addition, the alternative would offer the opportunity to create usable open space in the project site; this space could be linked to recreational lands to the west of the project site, resulting in beneficial land use impacts.

b. Population, Employment and Housing. Depending on the intensity of development on the site, the Waterway Preservation alternative would result in employment growth on the site that would be less than growth that would occur as a result of the project. Like the project, the alternative would not displace existing housing or residents.

c. Geology, Soils and Seismicity. Because the amount of open space is increased in this alternative compared to the proposed project, the amount of grading that would be required is expected to be reduced. However, the Waterway Preservation alternative would still expose people on the site to geologic hazards, including earthquakes, landslides, and soils prone to expansion and deformation.

d. Hydrology and Water Quality. The open space created as part of the alternative would permanently preserve all significant drainages and wetlands within the project site. The riparian channels in the site would continue to serve as natural channels to convey runoff that would be generated by new impervious surfaces on the site. These natural channels would treat storm water runoff from the site through photo degradation, slowing water speed, and the absorption of pollutants by plants. Although the new impervious surfaces that would be developed as part of the alternative would result in water pollution and a higher potential for down-grade flooding (like the proposed project) these impacts would be substantially reduced compared to the project.

e. Biological Resources. The alternative, which would maintain existing drainages and wetlands on the project site, would avoid most of the significant impacts of the project on biological resources. The alternative would retain the project site's sensitive plant and animal communities, including riparian zones and wetlands, and would not substantially diminish the habitat of protected plant and animal species. The proposed riparian buffer zones would encompass the abandoned farm buildings on the site, allowing for the preservation of these structures (and avoiding impacts on significant bat and owl habitat).

f. Transportation and Circulation. The Waterway Preservation alternative would generate trips during the construction and operation periods. Operation-period trips would be substantial, similar to or slightly less than the proposed project, and would be expected to result in similar transportation impacts, including unacceptable levels of congestion at intersections in Benicia and regional freeway segments. The connected network of open space created by the riparian/wetland buffers could allow for development of an interconnected trail system. This trail system could encourage walking/biking in and around the site, and would have the potential to reduce the trip generation of the project. In addition, the commercial uses clustered along East 2nd Street would have a greater potential to facilitate the creation of a transit node than the commercial uses proposed as part of the project (the alternative's commercial uses also would be more easily accessible by bicycle from bike lanes proposed along East 2nd Street).

g. Air Quality. The alternative would result in air quality impacts that are similar to or slightly less than the proposed project, including the emission of a substantial quantity of regional pollutants. The acreage of ground disturbance would be reduced under the alternative (compared to the proposed project), but this would not avoid significant unavoidable emissions of particulate matter.

h. Noise. The alternative would result in similar noise impacts compared to the proposed project. Noise levels would increase during the construction period and during the project operation period due to more intense uses on the project site, and vehicle-related noise on streets in the vicinity of the site. Like the proposed project, noise impacts associated with the alternative would not be significant.

i. Visual Resources. The Waterway Preservation alternative would result in substantial hillside grading that would create adverse impacts on the visual character of the site. However, the alternative would preserve drainages and wetlands on the site, some of the key aesthetic elements of the area.

Although the site would be developed with commercial and industrial uses, the interconnected open space would enhance the visual quality of the area, compared to the proposed project. Therefore, the visual impacts of the alternative would be slightly reduced from those of the proposed project.

j. Public Services. The Waterway Preservation alternative would include an approximately 10-acre parcel to accommodate new fire station, police, and public works facilities on the site. Therefore, the impacts of the alternative on public services would be substantially reduced from those associated with the proposed project.

C. HILLSIDE/UPLAND PRESERVATION ALTERNATIVE

1. Principal Characteristics

The proposed project would require approximately 9,000,000 cubic yards of soil movement. Proposed grading would level or substantially flatten many of the hillsides that are an important scenic resource in Benicia. As described in previous sections, the results of this recontouring of the site would be seen from various viewpoints. Soil from hillsides would be used to fill in on-site drainages, resulting in significant changes to local hydrology.

The Hillside/Upland Preservation alternative (Figure V-2) would preserve most of the larger hills within the project site, including the prominent hilltops south of Lake Herman Road. The preservation of most steep slopes within the project site would reduce grading by approximately 70 percent. Additional earthmoving savings could occur if development were to occur along hill contours, rather than perpendicular to contours.

The alternative would also preserve existing drainages and wetlands on the project site. Drainages would be protected with 100-foot buffers. Although these buffers would be approximately half the size of the riparian buffers outlined in the Waterway Preservation alternative, they would be wide enough to protect water quality, slow the speed of runoff from adjacent slopes, and could accommodate hiking or walking paths without intruding on jurisdictional wetlands. Open space lands would include the abandoned farm buildings on the site, allowing them to be retained (and avoiding impacts on significant bat and owl habitat).

The configuration of commercial and industrial land uses that would be developed as part of the alternative would be similar to the configuration proposed as part of the project: commercial uses would be clustered on the eastern end of the site near I-680 and industrial uses would stretch to the west. Similar to the Waterway Preservation alternative, the industrial and commercial uses developed in this alternative would be bisected by bands of open space (including hilly areas and drainages), which could be used as part of a trail network. This mixture of commercial, industrial, and open space lands would require creative lot configuration, and street patterns.

The Hillside/Upland Preservation Alternative includes the following land uses. Land used for roads and infrastructure would be incorporated into the listed acreages for the various land uses.

- 33 acres of commercial uses
- 167 acres of industrial uses
- 10 acres of public facilities

- 317 acres of open space/landscaped area

2. Analysis of Hillside/Upland Preservation Alternative

The Hillside/Upland Preservation alternative is evaluated below for all the topics analyzed in the EIR with the exception of: hazards and hazardous materials; cultural and paleontological resources; utilities; and urban decay. The impacts associated with these excluded topics would be very similar for all of the development alternatives (including the Hillside/Upland Preservation alternative), and almost the same as those that would result from implementation of the proposed project.

a. Land Use and Planning Policy. The Hillside/Upland Preservation alternative would result in the development of business park uses on the project site, similar to the proposed project. The alternative would be generally consistent with the General Plan and Zoning designations of the project site, although a small amount of land along East 2nd Street would need to be designated for commercial uses. Compared to the proposed project, the alternative would be substantially more consistent with policies in the General Plan, specifically those that relate to preservation of wetlands, creeks, associated plant and animal communities, and hillsides. Therefore, the Hillside/Upland Preservation alternative would not result in the significant policy inconsistency-related impacts that would result from the proposed project. In addition, the alternative would offer the opportunity to create usable open space in the project site; this space could be linked to recreational lands to the west of the project site, resulting in beneficial land use impacts.

b. Population, Employment and Housing. Depending on the intensity of development in the site, the Hillside/Upland Preservation alternative would result in employment growth on the site similar to (but less than) growth that would occur as a result of the project. Like the project, the alternative would not displace existing housing or residents.

c. Geology, Soils and Seismicity. The Hillside/Upland Preservation alternative would substantially reduce grading on the site (by up to 70 percent, depending upon the site design of individual lots). Although the alternative would still expose people on the site to geologic hazards, reliance on engineered fill would be reduced, which could diminish some of the geologic hazards associated with the project.

d. Hydrology and Water Quality. The alternative includes approximately 100-foot buffers around drainages and wetlands on the project site. Although these buffers are not as substantial as the ones that would be created as part of the Waterway Preservation alternative, they would be sufficient to protect the existing drainage network of the project site. The riparian channels in the site would continue to serve as natural channels to convey runoff that would be generated by new impervious surfaces on the site. These natural channels would treat storm water runoff from the site through photo degradation, slowing water speed, and the absorption of pollutants by plants. Although the new impervious surfaces that would be developed as part of the alternative would result in water pollution and a higher potential for downstream flooding (like the proposed project) these impacts would be substantially reduced compared to the project.

e. Biological Resources. The alternative, which would maintain existing drainages and wetlands on the project site in 100-foot buffers, would avoid most of the significant impacts of the project on

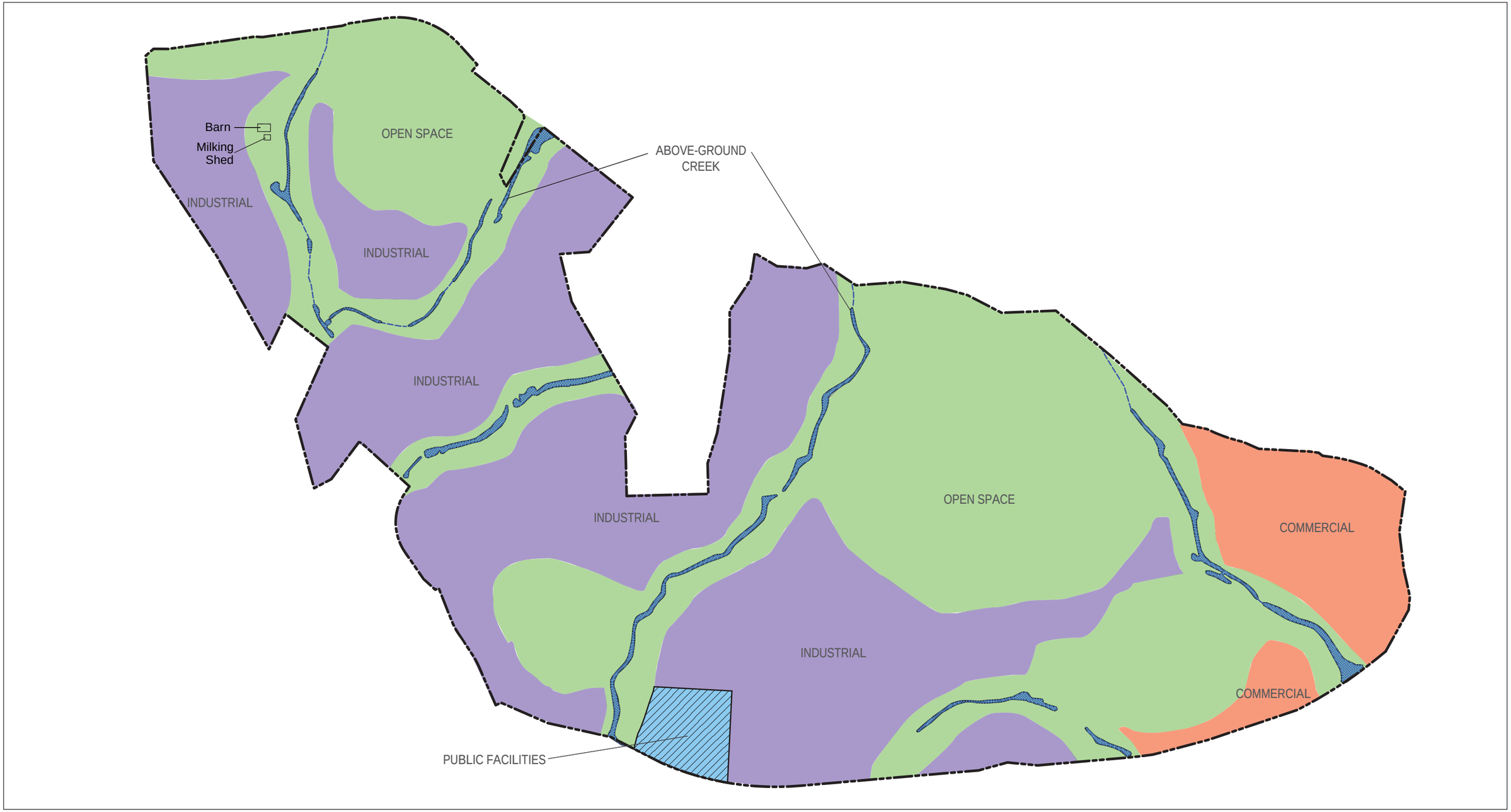

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FIGURE V-2

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Benicia Business Park EIR

Hillside/Upland Preservation Alternative

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biological resources. The alternative would retain the project site's sensitive plant and animal communities, including riparian zones and wetlands, and would not substantially diminish the habitat of protected plant and animal species. The proposed riparian buffer zones would encompass the abandoned farm buildings on the site, allowing for the preservation of these structures (and avoiding impacts on significant bat and owl habitat).

f. Transportation and Circulation. The Hillside/Upland Preservation alternative would generate trips during the construction and operation periods. Operation-period trips would be substantial, similar to or slightly less than the proposed project, and would be expected to result in similar transportation impacts, including unacceptable levels of congestion at intersections in Benicia and regional freeway segments. The connected network of open space created by the protected hillside areas and riparian/wetland buffers could allow for development of an interconnected trail system. This trail system could encourage walking/biking in and around the site, and would have the potential to reduce the trip generation of the project.

g. Air Quality. The alternative would result in air quality impacts that are similar to or slightly less than the proposed project, including the emission of a substantial quantity of regional pollutants. The volume of ground disturbance would be substantially reduced under the alternative (compared to the proposed project, grading could be reduced by 70 percent), but this would not avoid significant emissions of particulate matter.

h. Noise. Because grading activities on the site would be substantially reduced as part of this alternative, construction-period noise impacts could be substantially lessened. Noise levels would increase during the project operation period due to more intense uses on the project site, and vehicle-related noise on streets in the vicinity of the site. Like the proposed project, noise impacts associated with the alternative would not be significant.

i. Visual Resources. The Hillside/Upland Preservation alternative would retain the key aesthetic components of the project site, including major hillsides, wetlands, and riparian areas. Although the site would be developed with commercial and industrial uses, the interconnected open space would enhance the visual quality of the area, compared to the proposed project. Views of the site from Lake Herman Road and other public viewpoints in the vicinity of the site would be least affected by this alternative.

j. Public Services. The Hillside/Upland Preservation alternative would include an approximately 10-acre parcel to accommodate new fire station, police, and public works facilities on the site. Therefore, the impacts of the alternative on public services would be substantially reduced from those associated with the proposed project.

D. MIXED USE ALTERNATIVE

1. Principal Characteristics

The San Francisco Bay Area continues to experience very high housing prices and a shortage in housing supply. Solano County has historically provided lower cost housing within the region. Solano County as a whole is "housing rich," meaning that it has a supply of housing which exceeds the housing demand related to the County's job base. As a result, Solano County residents have to

commute out of the County to employment, contributing to traffic congestion in the region. After the creation of business park-related jobs, Benicia would experience high commute rates from communities in central and eastern Solano County, that have lower-priced housing, to the new jobs in Benicia. However, the addition of jobs within the County may reduce commutes out of the County. The inclusion of housing, particularly higher-density housing for families, as part of the project has the potential to create a mixed use community, given addition of new jobs that would result from the business park project and the high potential for community-serving retail uses. The Mixed Use alternative (Figure V-3) includes a diversity of land uses that would encourage transportation alternatives and preserve the site's key natural features.

The alternative includes significant acreage for residential uses: 63 acres, in the western portion of the site for high-density housing and 16 acres, in the central portion of the site, for medium-density housing. All housing on the site would be within walking distance of the commercial and industrial uses; residents of the project with jobs in the business park would not need to drive to work. However, all residential uses would be separated from commercial and industrial uses by riparian buffers and open space. The purpose of these buffers is to protect residents from adverse impacts, like noise and truck traffic, that could result from light manufacturing plants and shopping centers. These open space areas could also be an amenity for homeowners and renters, and would be easily accessible for walking to work or shopping and recreational use. Open space in the site would be linked, allowing for future trail connections to Lake Herman Park to the west of the business park, and would encompass the existing farm buildings, which provide habitat for bats and owls.

Compared to the other two development alternatives, the Mixed Use alternative includes slightly less commercial space (approximately 27 acres compared to 33 or 34 acres). More importantly, commercial-designated land is distributed throughout the site to encourage the development of businesses that serve the local resident population and business park employees. However, commercial uses would be located along East 2nd Street (a large site is located near the I-680 interchange), allowing for a regional, not just local, customer base.

The alternative also protects existing creeks and drainages with buffers ranging from 50 feet to 100 feet.

The following set of bullets summarizes land uses that are proposed as part of the Mixed Use alternative. Land used for roads and infrastructure would be incorporated into the listed acreages for the various land uses.

- 63 acres of high density (up to 21 homes/acre) residential uses
- 16 acres of medium density (up to 14 units/acre) residential uses
- 27 acres of commercial uses
- 171 acres of industrial uses
- 10 acres of public facilities
- 240 acres of open space

2. Analysis of Mixed-Use Alternative

The Mixed-Use alternative is evaluated below for all the topics analyzed in the EIR with the exception of: hazards and hazardous materials; cultural and paleontological resources; utilities and public services; and urban decay. The impacts associated with these excluded topics would be very similar

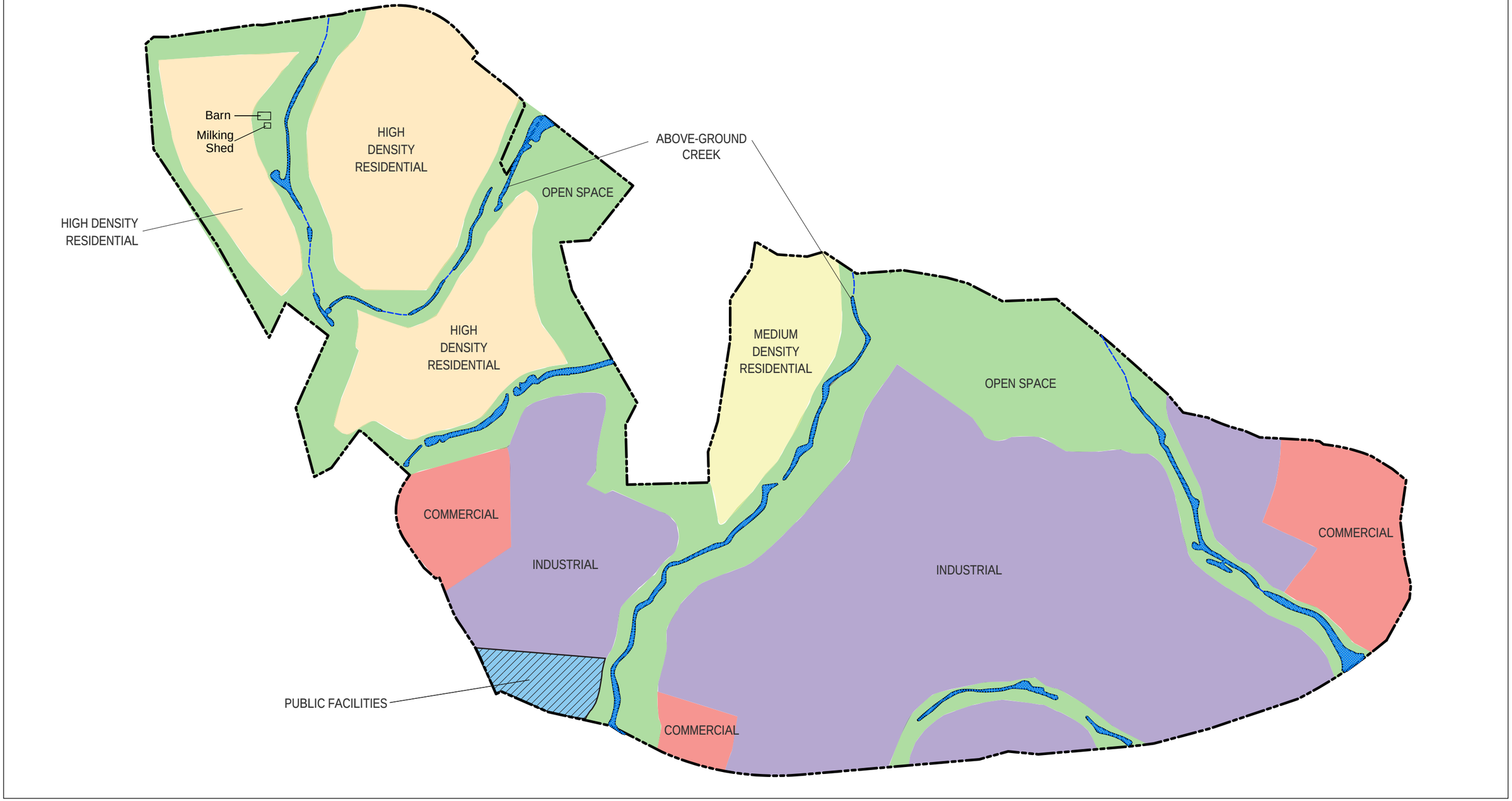

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FIGURE V-3

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Benicia Business Park EIR

Mixed Use Alternative

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for all of the development alternatives (including the Mixed-Use alternative), and almost the same as those that would result from implementation of the proposed project.

a. Land Use and Planning Policy. The Mixed-Use alternative would result in the development of commercial, industrial, and residential uses in the project site. Residential and industrial uses would be separated by open space buffers to reduce the potential for land use incompatibility. The alternative would be inconsistent with the current General Plan and Zoning designations for the site; approximately 90 acres of land designated for limited industrial uses would need to be re-designated to medium-density and high-density residential uses, and commercial uses. Compared to the proposed project, the alternative would be substantially more consistent with policies in the General Plan related to preservation of wetlands, creeks, and associated plant and animal communities, and the development of mixed uses to reduce automobile use. However, the mixed use alternative would create significant new policy inconsistency related impacts.

The new residential area on the western portion of the project site would be physically separated from the residential areas to the west by intervening industrial and open space areas (and topography). The projected 1,500 housing units that could be developed in this area would not be sufficient to support a new elementary school, so young school children would have to travel to one of the existing elementary schools elsewhere in Benicia. The intervening land uses and the area's topography makes it unlikely that new residential roadway connections as well as bicycle and pedestrian trails could be developed between the existing residential development in Southampton and the new residential area on the project site. Therefore, residents of the residential neighborhood on the project site would use East 2nd Street to connect to the rest of Benicia. This would result in the mixing of residential traffic with the truck traffic generated by the existing and proposed industrial areas. The new residential area would also be developed adjacent to existing and proposed industrial areas and in proximity to the IT site (located to the north, across Lake Herman Road) which is the subject of extensive site remediation of hazardous and toxic materials contamination. Such siting would not be consistent with General Plan policies for buffering between industrial/commercial uses and future residential uses.

b. Population, Employment and Housing. The Mixed-Use alternative, if developed with 63 acres of high density residential uses and 16 acres of medium density residential uses, could expand the City's housing supply by 1,500 units. Higher densities are also likely to enable the construction of affordable units. Employment growth would also occur, but at a lower rate than the proposed project. The direct population increase on the project site would be considered substantial, but may not be adverse due to its location near a major job center. If usable transit facilities, and bike and pedestrian amenities, are constructed near the residential neighborhoods developed as part of the alternative, anticipated growth could result in a less-than-significant population impact.

c. Geology, Soils and Seismicity. Because the amount of open space is increased in this alternative compared to the proposed project, the amount of grading that would be required is expected to be reduced. However, the Mixed-Use alternative would still expose people on the site to geologic hazards, including earthquakes, landslides, and soils prone to expansion and deformation.

d. Hydrology and Water Quality. The alternative includes approximately 50- to100-foot buffers around drainages and wetlands on the project site. Although these buffers are not as substantial as the ones that would be created as part of the other two development alternatives, they would be sufficient to protect the existing drainage network of the project site. The riparian channels in the site would

continue to serve as natural channels to convey runoff that would be generated by new impervious surfaces on the site. These natural channels would treat storm water runoff from the site through photo degradation, slowing water speed, and the absorption of pollutants by plants. Although the new impervious surfaces that would be developed as part of the alternative would result in water pollution and a higher potential for downstream flooding (like the proposed project) these impacts would be substantially reduced compared to the project (but not as reduced as the Waterway Preservation alternative).

e. Biological Resources. The alternative, which would maintain many of the existing drainages and wetlands on the project site by preserving 50- to 100-foot buffers, would avoid most of the significant impacts of the project on biological resources. The alternative would retain the project site's sensitive plant and animal communities, including riparian zones, wetlands, and abandoned buildings, and would not substantially diminish the habitat of protected plant and animal species.

f. Transportation and Circulation. The Mixed-Use alternative, which would enhance housing opportunities for people who may choose to live near their place of work, could reduce per capita driving distances compared to the proposed project. However, because housing uses would have a higher trip generation rate than most industrial uses, the alternative would generate a far greater number of overall trips than the proposed project. These additional trips would result in increased congestion on local and regional roadways. While not quantified or modeled as part of this EIR, the Mixed-Use alternative would likely result in more significant and unavoidable traffic impacts than the proposed project.

g. Air Quality. The Mixed-Use alternative would require substantial grading, similar to the proposed project, and would result in approximately the same construction period air quality impacts. Although development of residential uses near a major job center in Benicia could increase the potential for short commutes, the alternative would generate many more vehicle trips than the proposed project. Therefore, the impacts of the alternative on regional air quality would be expected to be far worse than the proposed project or the other alternatives.

h. Noise. The alternative would result in similar noise impacts compared to the proposed project. Noise levels would increase during the project construction period due to the use of heavy machinery, and during the operation period due to more intense uses on the project site, and vehicle-related noise on streets in the vicinity of the site. Because the Mixed-Use alternative would generate more vehicle trips than the proposed project, noise impacts around local roadways would also be more substantial.

i. Visual Resources. The Mixed-Use alternative would result in substantial hillside grading that would create adverse impacts on the visual character of the site. However, the alternative would preserve drainages and wetlands on the site. Although the site would be developed with commercial, industrial, and residential uses, the interconnected open space would enhance the visual quality of the area, compared to the proposed project. Therefore, the visual impacts of the alternative would be slightly reduced from those associated with the proposed project.

j. Public Services. The Mixed-Use alternative would include an approximately 10-acre parcel to accommodate new fire station, police, and public works facilities on the site. Therefore, the impacts of the alternative on public services would be substantially reduced from those associated with the proposed project.

E. OTHER ALTERNATIVES CONSIDERED

The project site is one of the few available sites in Benicia that is large enough to accommodate a business park, and it is planned for such use by the City. Few other suitable sites, including those with freeway access within easy driving distance to San Francisco and the East Bay, are available for development of commercial and industrial uses. Therefore, no off-site alternatives were considered in this analysis. Other alternatives considered include: 1) an all-residential alternative; 2) an all-industrial alternative; and 3) placing the site under a conservation easement. However, these alternatives were rejected because they would not meet the objectives of the project sponsor or were considered infeasible.

F. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that the EIR identify the environmentally superior alternative. The No Project alternative would eliminate most of the significant impacts associated with the proposed project. The alternative would not result in ground-disturbing activities, new construction, and the development of new commercial and industrial uses in the site (and the generation of associated new vehicle trips and air pollution). In addition, the No Project alternative would maintain all drainages, wetlands, sensitive habitat, and hillsides on the project site, which would avoid the project's significant biology, hydrology, land use, and aesthetic impacts. However, while the No Project alternative would be the environmentally superior alternative in the context of impact reduction, it would not meet the primary objectives of the project.

CEQA Guidelines section 15126(e)(2) requires that an additional alternative be designated as the environmentally superior alternative, if the No Project alternative is identified as the environmentally superior alternative.

That secondary environmentally superior alternative, the Hillside/Upland Preservation alternative, which would preserve creeks and wetlands within 100-foot buffers, would leave steep slopes undeveloped, and would reduce many of the significant impacts of the project while still meeting many of the project sponsor's objectives. Preservation of drainage and wetland features on the site would eliminate many of the significant impacts to biological resources of the project, including the development of sensitive habitat and impacts to protected animal species. The protection of waterways would also reduce impacts to storm water quality, and mitigate the effects of increased impervious surfaces on downstream flooding. Preservation of steep slopes on the site would retain some of the rural aesthetic character of the area, and would reduce adverse impacts to views from public viewpoints. In addition, the alternative would include space for new public facilities on the site, substantially reducing impacts associated with the provision of new public services. Although this alternative would result in significant unavoidable traffic and air quality impacts (similar to the proposed project), it would be environmentally superior to the proposed project.