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REVISED DRAFT ENVIRONMENTAL IMPACT REPORT

BAILEY ESTATES

(SCH #2001022016)

Prepared for
City of Pittsburg
Planning and Building Division

Prepared by

DARWIN MYERS ASSOCIATES

ENVIRONMENTAL RESEARCH ■ ENGINEERING GEOLOGY

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CITY OF PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

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1
INTRODUCTION

1
INTRODUCTION

PURPOSE OF THE EIR

Background

The purpose of this Environmental Impact Report (EIR) is to evaluate the environmental consequences that would result from developing 319 single-family residences on 122 acres of a 265-acre parcel. The project site is located at the southerly edge of the City of Pittsburg north of the Concord Naval Weapons Station boundary and west of Bailey Road. The site originally consisted of two parcels of 234 acres and 31 acres. In January 2001, the Bailey Estates developer recorded with the Contra Costa County Assessor a lot line adjustment, which shifted the line between the two existing parcels to create two new parcels that are 122 acres and 143 acres. The proposed development would subdivide the 122-acre parcel (reassigned APN 097-230-005) into 319 single-family residential lots and open space. The 143-acre parcel is not being proposed for development or annexation as part of the Bailey Estates Project.

The site is located south of Pittsburg city limits and is also outside of the City's Sphere of Influence. Approximately 20 acres at the northwestern corner of the site are outside of the Contra Costa County Urban Limit Line (ULL) and, except for a water tank and access road, would remain undeveloped as part of the project. The proposal is consistent with the City's General Plan Land Use Designations of Hillside Low Density Residential and Open Space. Implementation of the proposed project would require City approval of a prezoning of the project site to RS (Single Family Residential) and OS (Open Space), approval of a tentative map to subdivide the 122-acre site into 319 lots for single-family houses and design review approval of the house plans and architecture. Development of the project would also require Local Agency Formation Commission approval of a change in the City's Sphere of Influence boundary and annexation to the City of Pittsburg, the Delta Diablo Sanitation District and the Contra Costa Water District. This document includes an analysis of potential significant environmental impacts, as well as recommended mitigation measures that would reduce those impacts to less-than-significant levels.

This EIR is intended as an informational document that, in itself, does not determine whether a project will be approved, but aids in the local planning and decision-making process. California Environmental Quality Act (CEQA) Guidelines stipulate that an EIR is not meant to be a technical document.[1] Rather, it is intended to serve as a public disclosure document that: 1) identifies the environmental impacts associated with the proposed project which are expected to be significant; 2) describes mitigation measures that could minimize or eliminate significant adverse impacts; and 3) evaluates alternatives to the proposed project.

History

In January 2002, a Draft EIR (Original DEIR) was prepared and circulated for public comment. The responses to comments on the Original DEIR resulted in the identification of new significant impacts, which were published in a Final EIR (Rescinded FEIR). Because the public had not had an opportunity to comment on the newly identified impacts in the Rescinded FEIR, that document was rescinded prior to its certification. This Revised Draft EIR incorporates the newly identified impacts referenced above, as well as updated information released after publication of the Original DEIR. Furthermore, the EIR was edited to improve consistency between chapters and better organize and present technical data. This publication of the Revised DEIR is circulated for public comment only upon the *revised and/or new* sections hereof. The comment letters received on the Original DEIR, along with responses, are presented in Appendix B. Therefore, it is unnecessary for commentors to bring forward issues that were raised on the Original DEIR, as responses to those issues have been incorporated into this Revised DEIR.

As a result of comments received on the Original DEIR, a new alternative to the original subdivision design has also been introduced. For ease of review, this new alternative is incorporated into this Revised DEIR and is described and analyzed herein as the "Reduced Density Alternative – 249 Units."

CEQA Provisions/Revised EIR

The California Environmental Quality Act (CEQA) Guidelines Section 15088.5 explains the provisions for recirculation of an EIR:

> *A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement.*

If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified. In this case, the City of Pittsburg elected to recirculate the entire DEIR, including comments and responses to comments on the Rescinded EIR. Because the EIR comments pointed out omissions or resulted in new information, the text of the Revised Draft EIR was updated. As a result, the EIR chapters all contain some edits and clarification. The focus of the review comments on the Revised Draft EIR, however, should be limited to the following:

- New or modified environmental impacts and mitigation measures;
- The new alternative, presented in Section 6.3;

- The Environmentally Superior Alternative discussion, presented in Section 6.6; and
- The updated Chapter 5: Impact Overview.

Table 1-1 presents a capsule summary of the changes to the significant environmental impacts and mitigation measures.

Table 1-1
Capsule Summary of Modifications to Significant Impacts and Mitigation Measures Made in the Revised Draft EIR

3.0 Planning Policy No new significant impacts/mitigation measures were identified.
4.1 Land Use and Land Use Compatibility There were odor, noise and wildland fire impacts that were presented in this section and in the environmental assessments for air quality, noise, and public services/utilities section. To avoid redundancy, the impact assessments were eliminated from Section 4.1. Furthermore, the loss of rangeland (Impact 4.1-3) is identified as a significant and unavoidable impact of the project.
4.2 Geology/Soils/Seismicity No new impacts have been identified, but Mitigation Measures 4.2-1A, 4.2-1B, 4.2-2, 4.2-3C, 4.2-6, and 4.2-7D were modified for clarity. Old Mitigation Measure 4.2-5C was eliminated because it conflicted with Mitigation Measure 4.3-4.
4.3 Drainage/Water Quality No new impacts have been identified, but there have been changes to the mitigation measures. Briefly, the language in Mitigation Measures 4.3-1A-F, 4.3-3 and 4.3-4 was clarified; Mitigation Measure 4.3-2 was changed from a study (which is not a mitigation measure) to a performance standard.
4.4 Transportation/Circulation The analysis of cumulative traffic was expanded (year 2025), and the traffic impacts were re-evaluated by the EIR traffic engineer, Abrams Associates. Minor clarifications in language were made, but no new traffic impacts or mitigation measures were identified. The mitigation measures for improvements to intersections in the City of Concord involve payment of a pro rata share of the recommended improvement, with a note that cumulative impacts at the two Concord intersections will remain significant and unavoidable until the improvements are installed.
4.5 Noise No new significant impacts/mitigation measures were identified but Mitigation Measure 4.5-1A has been revised to require a design that will attenuate outdoor noise levels behind sound barrier walls to a CNEL of 60 dB.
4.6 Air Quality No new impacts have been identified, but the characterization of Impact 4.6-1 has been expanded and one additional mitigation requirement has been added for this significant impact, requiring the equipment powered by internal combustion engines to be fitted with mufflers that are in good condition.

4.7 Public Services/Utilities Impacts 4.7-1 and 4.7-2, identified as *significant and unavoidable impacts*, even with implementation of the mitigation measures have had additional measures added to each. Impact 4.7-3 is a new impact that is also considered *significant and unavoidable*. A mitigation measure has been added for Impact 4.7-4. Impact 4.7-5 is considered a *significant and unavoidable impact*, even with the proposed mitigation measures. Impact/Mitigation Measures 4.7-6 through 4.7-10 are unchanged. Impact/Mitigation Measure 4.7-11 is new, and Impact/Mitigation Measure 4.7-12 is unchanged.
4.8 Biological Resources The impacts and mitigation measures have not changed, but the discussion of impacts has been updated in the light of a jurisdictional wetland delineation for the project. Impacts 4.8-4 and 4.8-5 are identified now as *significant and unavoidable* adverse impacts of the project.
4.9 Cultural Resources No new impacts have been identified but Mitigation Measure 4.9-1 has been revised to provide more specificity on the appropriate response to any archaeologic material discovered during grading, trenching or other on-site excavation.
4.10 Visual Quality The impacts and mitigation measures are unchanged with the exception of 4.10-5, which requires, as a mitigation measure, the undergrounding of the water reservoir in the northwest corner of the site.

EIR SCOPE

As the Lead Agency,[2] the City of Pittsburg Community Development Department prepared an Initial Study that is included in this EIR as Appendix A. The Initial Study checklist identifies potentially significant impacts, including 1) geology and soils, 2) hydrology and water quality, 3) noise, 4) public services, 5) recreation, 6) transportation/traffic, 7) utilities and public services, and 8) mandatory finding of significance. As required by Section 15126 of the CEQA Guidelines, this EIR focuses on those issues which could involve significant impacts from the project. Based on the Initial Study, the following topics have been identified as having potentially significant impacts due to the proposed project and are analyzed in greater detail in the EIR:

Land Use Compatibility	Air Quality
Geology/Soils	Public Services/Public Utilities
Drainage/Water Quality	Biological Resources
Traffic	Cultural Resources
Noise	Visual Quality

As required by CEQA Guidelines, a discussion of alternatives to the proposed project has been included in the EIR. Additionally, the EIR incorporates a discussion regarding cumulative impacts, significant unavoidable impacts, growth-inducing effects and irreversible environmental changes.

PUBLIC COMMENT

This Revised DEIR is being circulated to local and state agencies and to interested organizations and individuals who may wish to review and comment on the revised and/or new portions of the report. Both written and oral comments may be made during the 45-day public review period. At the close of the public review period, written responses will be prepared for all oral and written comments received on the Revised DEIR. (Comments received on the Original DEIR are presented in Appendix B.) The Revised DEIR and written comments and responses on the new and revised sections of the Revised DEIR will constitute the Final EIR for the project. The Final EIR and Mitigation Monitoring Plan will be considered by the Pittsburg Planning Commission and City Council in their review of the proposed subdivision and related application.

INTENDED USES OF THE EIR

In accordance with Section 21080 of the CEQA Guidelines, as amended, the City must consider the environmental implications of approving Prezoning, Annexation, Vesting Tentative Map and Design Review applications. This EIR will be used by the City of Pittsburg Planning Commission, City Council and staff in determining whether the project should be denied or approved. If approved, mitigation measures, identified herein, to reduce significant impacts would become conditions of project approval.

REPORT ORGANIZATION

Following this introduction is a summary of impacts and mitigation measures (Table 1-2) and the following report sections: Chapter 2 describes the project, Chapter 3 discusses the general plan and zoning policies, and Chapter 4 discusses the environmental issues at length. Under each issue, relevant environmental setting information is presented to describe existing conditions on site, impacts of the proposed project are evaluated, and mitigation measures are suggested. Less-than-significant impacts are also identified within each section.

Chapter 5 provides an impact overview to the proposed project, including potential significant effects that cannot be mitigated, significant irreversible environmental changes, growth-inducing impacts and a summary of cumulative impacts.

Chapter 6 summarizes four alternatives to the proposed project. These include: 1) no project (continuation of the existing land use); 2) a 249-unit reduced density alternative; 3) the applicant's 270-unit reduced density alternative; and 4) a mitigated alternative developed by the EIR team.

Chapter 7 provides a list of preparers of the EIR, references, and organizations and individuals contacted during preparation of the EIR. The appendices contain the Initial Study, comments on the original Draft EIR and responses to those comments, along with additional technical information.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

CEQA Guidelines, Section 15382 (2003) defines a "significant effect on the environment" as a "substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

A summary of potentially significant impacts and mitigation measures is provided in Table 1-2. It summarizes the significant impacts and mitigation measures identified to reduce the impacts. The third column of the table indicates whether the mitigation measure identified will reduce the impact to an acceptable level (less than significant). A discussion of project impacts and mitigation measures can be found throughout Chapter 4.

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[1] State of California, Governor's Office of Planning, *California Environmental Quality Act Statutes and Guidelines*, 2000.

[2] CEQA Guidelines define the "Lead Agency" as the public agency that has the principal responsibility for carrying out or approving a project.

Table 1-2
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
PLANNING POLICY		
3-1: The proposed project may be only partially consistent with a variety of land use polices contained in the General Plan.	**3-1A:** Redesign the project to remove development in the northern drainage area, and reconfigure lots, add landscaping and increase street setbacks to minimize the visual impacts from Bailey Road. **3-1B:** Also refer to Mitigation Measures 4.1-2A through 4.1-2C, 4.7-1, 4.7-3, 4.7-5, 4.7-6, 4.8-1B, 4.8-2A, 4.8-4, 4.10-1B, 4.10-2 and 4.10-3.	Yes
LAND USE		
4.1-2: Potential land use conflicts will occur between the urban development and the range land abutting the project site to the west and south, as well as within the project site between the development and open space lands.	**4.1-2A:** The applicant shall submit a fencing plan as part of the improvement plan submittal. A double fence shall be provided wherever lots back up to grazing land. The double fence will consist of a sturdy wire fence separated no more than 3 feet from the development's backyard fencing. **4.1-2B:** Concurrent with the recordation of the final map, a separate document shall be recorded informing residents of the "Right to Farm" ordinance. **4.1-2C:** The applicant and/or developer shall provide a pamphlet to each new homeowner advising them of the necessity to stay out of the adjoining grazing lands. This pamphlet can also include information regarding the wetland area as recommended in the Biological Resources section.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.1-3: Development of the site will contribute to the cumulative loss of rangeland. The loss of rangeland is considered a *significant and unavoidable* impact of the project.	**4.1-3:** No mitigation is available.	No
GEOLOGY/SOILS/SEISMICITY		
4.2-1: Portions of the Tentative Subdivision Map may be inconsistent with General Plan policies calling for: a) use of 3:1 cut slope gradients; and b) use of retaining walls to avoid high engineered slopes.	**4.2-1A:** Use of 3:1 slope gradients shall be the standard for graded slopes throughout the project. Where 3:1 slope gradients are not feasible, use 3:1 slopes in combination with permanent (i.e., non-wood) retaining walls; and/or use of reinforcement earth in fill slopes (e.g., geogrid). Select (granular) fill material or dense sandstone bedrock can be a basis for increasing the gradient for the southern entrance to the project to 2.5:1, provided that slope stability calculations support the use of a 2.5:1 slope at this one location. The construction of 3:1 slopes on the off-site slopes to the south and west of the property may not be feasible if grading easements cannot be secured for engineered slopes with these gradients. In that instance, slope stability analysis and aggressive erosion control measures shall be required to document that the outlook for long-term stability is good, and to control erosion on these off-site slopes. **4.2-1B:** Within the residential project, use of 2:1 slope gradients shall be limited to side yard or rear yard slopes between residential lots up to 6 feet high (maximum). Any higher 2:1 slopes shall require special engineering (e.g., retaining walls and/or reinforced earth).	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.2-1C: Drainage terraces shall not be required on 2.5:1 (or flatter) slopes, but steel reinforced concrete-lined J-ditches may be required at toe of slope, top of slope, or behind retaining walls to control runoff. **4.2-1D:** All major slopes shall be contour-rounded and provide a smooth transition to natural topography. **4.2-1E:** The topsoil shall be salvaged during clearing of the areas to be graded throughout the project. The topsoil shall be used as a dressing on engineered slopes in open space areas of the project (including the off-site engineered slopes) possessing gradients of 3:1 or flatter.	
4.2-2: Development of the proposed project will require mass grading of hillsides to create stable areas suitable for development. Such grading may result in erosion, unnatural finished slopes, and potential structural drainage problems.	**4.2-2A:** A design-level geotechnical report shall be prepared for this project by a geotechnical engineer. This geotechnical report shall provide design-level recommendations for grading, drainage and foundations, including standards for cut/fill transition lots, sandstone/shale-transition lots, and differential fill thickness lots. Grading, foundation and improvement plans shall comply with recommendations in the approved geotechnical report. **4.2-2B:** Final design of the proposed improvements shall be made in conjunction with a design-level geotechnical investigation, submitted to the City of Pittsburg for review prior to issuing any permits. This investigation shall incorporate stability analysis of both existing and reconstructed project area slopes. **4.2-2C:** All roads, structural foundations and underground utilities shall be designed to accommodate estimated settlements without failure, especially across transitions between fills and cuts.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.2-2D: The more expansive soils and bedrock shall be placed at the bottom of deep fills. **4.2-2E:** All fills shall be adequately keyed into firm, natural terrain unaffected by shrinkage cracks. **4.2-2F:** Subsurface drainage systems shall be installed in all keyways, and in swales which are filled. **4.2-2G:** Buttress fills shall be constructed at the toes of all major cut slopes and slide areas which abut development areas. **4.2-2H:** Grading within open space lands shall be contour-rounded to mimic natural terrain features, mantled with topsoil and revegetated. **4.2-2I:** Project area slopes shall have a factor of safety greater than 1.15 under pseudostatic conditions (i.e., assuming maximum possible groundwater levels during the life of the project and earthquake shaking). **4.2-2J:** In compliance with Health and Safety Element Policy 10-P-11, a geologic hazard abatement district shall be established for this project, or it shall be annexed into an existing GHAD. If maintenance of the storm water detention basin is not assigned to the GHAD, the entity recommended for maintenance of the basin must be acceptable to the City. This necessarily implies 1) a perpetual source of funding, 2) maintenance plan/maintenance schedule, and 3) documentation that maintenance activities do not conflict with requirements of permit-granting agencies.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.2-2K: A geotechnical engineer and an engineering geologist shall monitor all earthwork. The monitoring shall include preparation of an "as-built" geologic map that shows the location of keyways and location and depth of subdrains and location of cleanouts, based on field survey.	
4.2-3: Landslides and liquefiable soils have the potential to cause significant damage to improvements.	**4.2-3A:** The developer shall remediate landslides which present a potential hazard. The design-level geotechnical report shall analyze slope instability with respect to planned improvements, including: • Specific remediation measures to remove/stabilize landslides and areas of creeping soils within or affecting proposed lots. Where corrective grading is not economically feasible or environmentally acceptable, planned improvements shall be set back from those areas. • Impact deflection or catchment structures below unmitigated landslide or swale areas; and appropriate foundation design. **4.2-3B:** Although the preliminary data provided by previous geotechnical investigations indicate the liquefaction potential of Quaternary deposits on the site to be low, the design-level geotechnical report shall further evaluate liquefaction potential based on adequate subsurface data and supporting engineering analysis if relatively clay-free sands are present. No development shall be allowed in areas of liquefiable soils without full remediation. **4.2-3C:** Grading, foundation and improvement plans shall comply with recommendations in the approved geotechnical report.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.2-4: Potential vertical and lateral movement of fills could cause significant damage to improvements.	**4.2-4A:** The design-level geotechnical report shall include settlement analysis for each major fill. The report shall also provide a specific analysis for differential vertical movement of building areas where fill thickness varies by more than 10 feet; for cut/fill transition lots; and provide analysis of lateral movement for loss at the edge of proposed fill slopes. It shall also provide specific standards and criteria for selective grading of major fills. Building permits shall not be issued until it is established that the foundation of structures can accommodate the anticipated differential settlement. **4.2-4B:** The design-level report shall provide a plan for long-term monitoring of settlements/swelling and lateral movement of fills 50 feet thick (or greater). The engineers for the project shall establish survey monuments in fill areas, especially ravine fills. Monitoring is to commence with the completion of rough grading and continue throughout development of all lots in that phase of the project. The design-level report shall also provide criteria for the timing of residential construction within major fills. **4.2-4C:** Fills shall be limited to a maximum thickness of 80 feet because the behavior of deeper fills is less well understood and, hence, less predictable.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.2-5: The proposed project involves cuts and fills on moderately steep slopes, with a potential to cause significant erosion of unprotected slopes, and downslope sedimentation both on- and off-site.	**4.2-5A:** The applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP) to control on-site erosion in accordance with National Pollution Discharge Elimination System (NPDES) regulations and subject to the approval of the City Engineering Department and the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). All of the provisions of this plan shall be implemented throughout the project site and shall include the following: • Leave existing vegetated areas undisturbed until construction of improvements on each portion of the development site is ready to begin; • Immediately revegetate or otherwise protect all disturbed areas from both wind and water erosion upon the completion of grading through the use of mulch and/or jute netting blankets; • Collect storm water runoff into stable drainage channels, from small drainage basins, to prevent the buildup of large, potentially erosive storm water flows; • Direct runoff away from all areas disturbed by construction; • Use sediment ponds or siltation basins to trap eroded soils before runoff is discharged into on-site or off-site drainage culverts and channels;	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Schedule major site development work involving excavation and earthmoving for construction during the summer construction season from April 15 through October 1 (any earthwork undertaken after October 1 shall be limited to activities directly related to erosion control); and • Develop and implement a program for the handling, storage, use and disposal of fuels and hazardous materials. The program shall also include a contingency plan covering accidental hazardous material spills. **4.2-5B:** Project plans shall incorporate the appropriate design, construction and continued maintenance of one or more of the following long-term sedimentation control measures. The specific measures shall be based on the recommendations of the project geotechnical engineer and hydrologist. • Construct sediment traps/basins and grassy swales at strategic locations to control sediment. • Revegetate and maintain graded slopes, either through a homeowners association or a geotechnical hazard abatement district. • Provide closed downspout collection systems for individual structures and area drains for all residential lots, where such lot drainage programs do not conflict with clean water objectives of the project. • Design cut and fill slopes to minimize, as much as possible, the velocity of sheet flow runoff.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.2-5C: Concentrated runoff shall not be permitted to drain over cut or fill slopes. **4.2-5D:** The location of lined drainage ditches shall be specified on the grading plan accompanying the design-level geotechnical investigation report, which shall be reviewed and approved by the City Engineer.	
4.2-6: Expansive soils and/or bedrock have the potential to cause significant damage to foundations, slabs and pavements.	**4.2-6:** Approvals for design of road sections and building permits shall be based on adequate test borings and laboratory testing of expansion potential of soils and clayey bedrock. The design-level geotechnical investigation shall provide criteria for foundation of pavement design developed in accordance with the Uniform Building Code (UBC) and Pittsburg Municipal Code requirements on the basis of subsurface exploration and laboratory testing. For residences located on level building pads at least 10 feet from the top of any slope, mat foundation systems can be used to support one- or two-story wood-frame dwellings. The foundations shall be sufficiently stiff to move as rigid units with minimum differential movements. The constraints on the use of expansive soil near finish grade shall be evaluated in the design-level geotechnical investigation report.	Yes
4.2-7: The proposed project would result in significant grading in unstable/marginally stable areas for domestic water reservoirs, pipelines, and a variety of urban services needed to serve the community.	**4.2-7A:** The project proponents shall design all water and wastewater infrastructure to be located in the open space within the subdivision, based upon a grading plan and engineering geotechnical study prepared as part of the design-level grading plan studies for the project. These plans shall be prepared prior to recording the final subdivision map for the project. The grading plan shall be reviewed and approved by the City Engineer.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.2-7B: The water reservoir shall be constructed on competent bedrock. The construction of reservoirs on deeply weathered or highly sheared rock shall be avoided. Construction of the reservoir astride a cut/fill transition shall also be avoided. **4.2-7C:** Geotechnical studies shall include subsurface data for critical segments of on- or off-site mains (e.g., where mains must traverse steep slopes or slide areas). **4.2-7D:** The grading completion report that documents monitoring of the earthwork shall include an original geologic infrastructure of the project areas showing the details of observed features and conditions (including mapping of cut slopes and keyways). The original geologic map shall use an as-graded topographic map as a base. It shall also show the location of all subdrains and clean-outs based on a field survey.	
4.2-8: The soil and rock may have a pH less than 7. Untreated steel that is buried or in contact with the ground may be vulnerable to damage.	**4.2-8A:** Prior to issuance of grading or building permits, the developer shall submit the results of corrosivity testing of soil and bedrock. Any design changes recommended by the project geotechnical engineer as a result of the test shall be incorporated into the final design of improvements. **4.2-8B:** Pipelines shall be designed for the soil conditions. All buried ferrous metal fittings, valves and appurtenances (including bolts) used in water mains and other buried structures shall conform to the requirements in the City Standards.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
DRAINAGE/WATER QUALITY		
4.3-1: Increased rates of storm water runoff from the project site could exceed existing flow capacities within downstream drainage facilities, potentially causing an increase in the extent or duration of flooding.	**4.3-1A:** The applicant shall construct an on-site storm water detention basin, as needed to reduce peak rates of runoff from the project site for the design storm to a level that does not exceed pre-development conditions. The basin design data shall be subject to review by CCCFCWCD and approval by the City Engineer. If there is a cost for the CCCFCWCD review, it shall be borne by the applicant. **4.3-1B:** Because several downstream sections of Lawlor Creek lack the capacity to accommodate peak rates of storm water runoff during a wide range of storm events, the detention basin shall be designed to reduce project discharges for storms in which it has been determined that downstream flooding would be likely to increase following project development, instead of just during the 10-year and larger storms.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.3-1C: Prior to recordation of the final map, the project engineer shall determine the required storage volume and final design of the detention basin, discharge structure and all appurtenant facilities, which determination shall be subject to the review by the CCCFCWCD and approval by the City Engineer. The final design analysis shall include without limitation a basin routing study, including an evaluation of all watershed parameters to ensure that pre- and post-development conditions are accurately characterized, and shall address the need for warning and safety features if any potential exists for high flow velocities and/or deep standing water. The CCCFCWCD will perform a final hydrologic modeling to estimate the anticipated changes in off-site (downstream) flow rates. Thereafter, the primary spillway, storage capacity and other parameters will be adjusted as necessary so that the basin's discharges are timed to reduce overall flow rates. In the event that the CCCFCWCD determines that the basin requires either a larger storage capacity and/or refinement in the design of the outlet structure, the project applicant shall undertake such refinements at its expense. **4.3-1D:** The detention basin shall be offered for dedication to the Geologic Hazards Abatement District. If not maintained by the GHAD, an entity acceptable to the City with assure long-term funding shall maintain the basin.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.3-1E: The project engineer shall submit a maintenance plan for the basin, subject to review and approval of the City Engineering Department. The plan shall indicate maintenance access, plan for disposal for sediment excavated from the basin, criteria for triggering removal of sediment from the basin, annual inspection by the project engineer, estimated annual maintenance costs over a 25-year period, and other maintenance parameters identified by the City Engineering Department.	
	4.3-1F: The project engineer shall submit a fencing plan for the detention basin/service road acceptable to the City Planning Department and Engineering Department.	
4.3-2: Increases in the total volume of storm water runoff from the project site could destabilize or otherwise adversely affect the downstream channel and drainage facilities, potentially destabilizing downstream drainageways and increasing the extent or duration of existing flooding.	**4.3-2:** To mitigate the effect of the increased volume of runoff in the downstream water course, peak runoff from the graded and developed site shall be reduced by 5 percent below the pre-development runoff (for the 10-year design storm). The design of the detention basin shall also keep the peak flows for the 5-year storm at (or below) the pre-development peak.	Yes
4.3-3: Even with effective implementation of erosion control measures, clearing and mass grading activities during project construction will increase on-site soil erosion, potentially resulting in increased turbidity and sedimentation within downstream sections of Lawlor Creek.	**4.3-3:** The applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP) to control on-site erosion in accordance with National Pollution Discharge Elimination System (NPDES) regulations and subject to the approval of the City Engineering Department and the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). The provisions of this plan shall be implemented throughout the project site and shall include the following:	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Leave existing vegetated areas undisturbed until construction of improvements on each portion of the development site is ready to begin; • Immediately revegetate or otherwise protect all disturbed areas from both wind and water erosion upon the completion of grading through the use of mulch and/or jute netting blankets; • Collect storm water runoff into stable drainage channels, from small drainage basins, to prevent the buildup of large, potentially erosive storm water flows; • Direct runoff away from all areas disturbed by construction; • Use sediment ponds or siltation basins to trap eroded soils before runoff is discharged into on-site or off-site drainage culverts and channels; • Schedule major site development work involving excavation and earthmoving for construction during the summer construction season from April 15 through October 1 (any earthwork undertaken after October 1 shall be limited to activities directly related to erosion control); and • Develop and implement a program for the handling, storage, use and disposal of fuels and hazardous materials. The program shall also include a contingency plan covering accidental hazardous material spills.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.3-4: The quality of downstream receiving waters would be lowered if non-point source urban pollutants generated within newly developed areas are washed into Lawlor Creek by storm water runoff from the project site.	**4.3-4:** To help reduce the long-term accumulation of non-point source pollutants within downstream surface waters, the applicant shall incorporate long-term source control and pre-discharge treatment measures into the *Storm Water Pollution Prevention Plan* (SWPPP) described in Mitigation Measure 4.3-3 above, in accordance with the Contra Costa Countywide Clean Water Program, subject to the approval by the City Engineering Department and the CCCFCWCD.	Yes
TRANSPORTATION/CIRCULATION		
4.4-1: Project-generated traffic would result in significant adverse impacts to intersection operation at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections.	**4.4-1A** (Bailey Road/Myrtle Drive Intersection): • Intersection improvements at Bailey Road/Myrtle Drive are to consist of intersection signalization and construction of an exclusive left-turn lane on the intersection's southbound Bailey Road approach. Both improvements are also needed to provide acceptable Base Case operation. • The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Myrtle Drive intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.4-1B (Bailey Road/Concord Boulevard Intersection): • Intersection improvements at Bailey Road/Concord Boulevard are to consist of a left-turn lane on the northbound Bailey Road intersection approach and a left-turn lane on the southbound Bailey Road intersection approach. These improvements are needed to provide acceptable Base Case operation. • The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.	No
4.4-2: Project-generated traffic would result in significant adverse impacts to intersection operation at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections in Concord as well as at the south project access road connection to Bailey Road.	**4.4-2A** (Bailey Road/Myrtle Drive Intersection): • Intersection improvements at the Bailey Road/Myrtle Drive intersection consist of intersection signalization and construction of an exclusive left-turn lane on the intersection's southbound Bailey Road approach.	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Myrtle Drive intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.	
	4.4-2B (Bailey Road/Concord Boulevard Intersection): • Intersection improvements at Bailey Road/Concord Boulevard are to consist of an exclusive right-turn lane on the northbound Bailey Road at the intersection approach. • The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.	No
	4.4-2C: (Bailey Road/Project Access Intersections) • The applicant/developer shall signalize the southern project access intersections with Bailey Road.	Yes
4.4-3: Project-generated traffic would contribute to significant adverse impacts on Bailey Road between SR4 and Leland Road, a Route of Regional Significance.	**4.4-3:** The project developer shall pay regional and local traffic mitigation fees to help fund the expansion of capacity of Bailey Road between SR4 and Leland Road.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.4-4: Project-generated traffic would contribute to significant adverse impacts at the Bailey Road / SR4 Eastbound Ramps intersection. Bailey Road / Leland Road and Bailey Road / Myrtle Drive as well as at both intersections of the project access roads with Bailey Road would also experience significant adverse impacts, but these intersections can be mitigated to acceptable levels.	**4.4-4A:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / SR4 Eastbound Ramps intersection: • Provide additional eastbound right-turn capacity by widening the approach to provide an additional right-turn lane. (Note: Due to existing retaining walls this mitigation is not feasible from the perspective of constructability. See Mitigation Measures 4.4-1 and 4.4-2.)	No
	4.4-4B: The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Leland Road intersection: • On the southbound approach, provide an additional right-turn lane. • On the westbound approach, widen the approach to minimize the offset between the approach through lanes on the west leg and the receiving lanes on the east leg, and provide a 4-foot-long raised median from Bailey Road to east of Willow Avenue. • On the eastbound approach, widen the approach to convert one left-turn lane pocket to a left-turn trap lane, add a 4-foot-long raised median, and a 300-foot-long right-turn pocket.	Yes
	4.4-4C: The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Concord Boulevard intersection: • On the northbound approach, provide exclusive lanes for both the right-turn and left-turn movements, and a second through lane.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• On the southbound approach, provide two exclusive left-turn lanes. • On the eastbound and westbound approaches, provide a third through lane.	
	4.4-4D: The Bailey Road / Myrtle Drive intersection requires signalization, the installation of an exclusive left-turn lane on the southbound Bailey Road approach, and the widening of the westbound Myrtle Drive approach to provide an exclusive left-turn lane. The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.	No
4.4-5: The project's proposed internal street layout could not safely accommodate projected traffic levels should San Marco Boulevard access Bailey Road via use of the project's internal streets.	**4.4-5:** If the City of Pittsburg determines that San Marco Boulevard would be aligned through the Bailey Estates site, the project site plan shall be revised to provide a direct alignment of San Marco Boulevard through the site to a T intersection with Bailey Road. No residential units shall front on this roadway. In addition, the number of project residential roadway connections to San Marco Boulevard shall be	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	minimized, ideally no more than one connection each to the north and south sections of the site. Left- and right-turn deceleration/acceleration lanes shall be provided on the San Marco Boulevard approaches to all project access roadways. The roadway would also need to be wide enough to provide Class II bicycle lanes as designated in the Regional Transportation Planning Committee's Bicycle Action Plan.	
NOISE		
4.5-1: Noise levels exceed both the 60 and 65dB land use guidelines for single-family residential development for Lots 1–6.	**4.5-1A:** A 9-foot-tall noise barrier fence shall be constructed at the rear of the flat-graded pads for Lots 1–6 adjacent to Bailey Road, in order to reduce the exterior noise to a CNEL of 60 dB. The noise barrier shall be designed by an acoustical engineer to ensure compliance with the 60dB standard. Suitable materials include wood, pre-cast concrete or masonry panels, or masonry block.	Yes
	Secondary Impact with Mitigation Implementation: Implementing this policy would be inconsistent with General Plan goals and policies that discourage visible sound walls.	
	4.5-1B: Revise the site plan to eliminate Lots 1–6 that are located immediately adjacent to Bailey Road. Implementing this mitigation would be in keeping with Policies 12-G-2 and 12-P-4 in the General Plan.	Yes
4.5-2: Units exposed to an outdoor CNEL exceeding 60 dB are expected to exceed the interior noise goal of 45 CNEL unless properly insulated.	**4.5-2:** House designs shall incorporate forced air mechanical ventilation or air conditioning to provide a habitable interior environment with the windows closed for Lots 1–13, 18–30, 118–120, and 214–226.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
AIR QUALITY		
4.6-1: Construction activities such as clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local air quality.	**4.6-1:** The project developer shall submit a dust control plan that incorporates the following measures as recommended by the BAAQMD: • Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent existing land uses shall be kept damp at all times, or should be treated with non-toxic stabilizers or dust palliatives; • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard; • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites; • Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites; • Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets; • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas; • Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.); • Limit traffic speeds on unpaved roads to 15 miles per hour;	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Install sandbags or other erosion control measures to prevent silt runoff to public roadways; • Replant vegetation in disturbed areas as quickly as possible; • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph; • Limit the area subject to excavation, grading and other construction activity at any one time; and • The project sponsor shall require their contractors and subcontractors to fit all internal combustion engines with mufflers which are in good condition.	
4.6-5: Residences may include wood-burning fireplaces that affect regional air quality and are a potential source of nuisance.	**4.6-5:** Only natural gas fireplaces, pellet stoves or USEPA-certified wood-burning fireplaces/stoves shall be permitted. Conventional open-hearth fireplaces shall not be permitted.	Yes
PUBLIC SERVICES/UTILITIES		
4.7-1: The project site is located outside of the 1.5-mile response radius for either of the two nearest fire stations.	**4.7-1A:** All project roadways shall be a minimum of 36 feet in width for double-loaded streets and 28 feet for single-loaded streets, shall be able to support 37 tons of weight, shall not exceed 16 percent grade, and shall have vertical clearance of at least 13'6". **4.7-1B:** The developer shall provide a minimum fire flow of 2,000 gallons per minute (gpm) for a minimum of two hours, and shall provide adequate fire hydrants in compliance with CCCFPD standards. **4.7-1C:** All homes shall have not less than Class "A" fire-rated roof assembly.	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.7-1D: All homes shall be equipped with fire sprinklers. **4.7-1E:** The developer shall install in all houses an in-home emergency response system with direct connection to emergency administration centers. **4.7-1F:** Only fire-resistant exterior building materials shall be used, e.g., stucco surfaces and tile roofs. **4.7-1G:** The developer shall pay the Contra Costa County Fire Protection District's impact fee (currently $235 per dwelling unit) at the time of building permit issuance to mitigate the increase in demand for services created by the project. **4.7-1H:** In a deed disclosure, the developer shall notify all property owners/buyers that the site is currently outside the 5-minute fire department response time radius specified by the General Plan.	
4.7-2: The project would create a new urban/rural interface located within the City's Southwest/South Hills planning area, thereby placing houses in close proximity to an area of high fire danger.	**4.7-2A:** In addition to the measures required by Mitigation Measure 4.7-1, the applicant/developer shall submit prior to commencement of grading for the project a *wildland fire suppression plan* subject to City and CCCFPD approval that, at a minimum, incorporates the following measures: • a weed abatement program consistent with CCCFPD policy and the Contra Costa County Weed Abatement Ordinance for open space within the project site; • operable fire hydrants at the project site prior to building construction;	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• a project roadway plan with adequate access into the surrounding open space area; and • a requirement for use of fire-resistant building materials (stucco walls, tile roofs) on exterior surfaces of all houses. **4.7-2B:** Prior to issuance of the first residential building permit, provide details on implementation of the wildland fire suppression plan, including: • proposed building materials; • evidence of operable hydrants; • evidence of an EVA to the surrounding open space; • evidence of implementation of the weed abatement program; and • identification of the entity to maintain safety improvements within the project open space and an adequate funding source.	
4.7-3: The project adds to the law enforcement responsibility of the Pittsburg Police Department. Without the addition of two sworn officers, the project will adversely impact compliance with General Plan Policy 10-P-39.	**4.7-3:** No mitigation is available.	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.7-4: The project site may be located outside the Police Department's range for radio reception.	**4.7-4:** Should police radio coverage of the site be determined by the City to be inadequate, the developer shall install a communications antenna or other equipment at a location determined by City staff to provide adequate reception within the project area. The required communication-related improvement shall be installed prior to issuance of a certificate of occupancy for any dwelling within the project that is outside of radio range, unless the Police Department determines the additional communication equipment is unnecessary because the City's expanded communication system is fully operational and can provide adequate coverage to the entire project area. If the antenna/facility location is off site, the City shall obtain the necessary easements for its installation.	Yes
4.7-5: The project will result in approximately 239 new students enrolled within the Mount Diablo Unified School District, increasing the demand for school services.	**4.7-5:** The applicant shall pay the District's school impact fee.	Yes
4.7-6: An increased demand for park services will occur with implementation of the project.	**4.7-6:** The applicant shall redesign the project plan to incorporate a public park that is sized according to the General Plan park standard of 5 acres per 1,000 residents, and in compliance with the minimum park dedication area specified by the Pittsburg Municipal Code, or provide in-lieu fees, improvements to dedicated land, and/or a combination thereof.	Yes
4.7-7: The project would increase demands on the municipal water supply and would require the need for an adequate water supply.	**4.7-7A:** The project applicant shall submit information to the Contra Costa Water District (CCWD) necessary to complete the District's inclusion request to the Bureau of Reclamation to specifically add the Bailey Estates project site to the Central Valley Project (CVP) contractual service area.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.7-7B: The applicant shall submit written evidence to the City of CCWD's ability to supply the project based on Reclamation approval of expansion of the CVP contractual service area to include the project site, or establishment of an adequate supply of City well water, prior to City approval of a Final Subdivision Map for the project. **4.7-7C:** To promote water conservation, the applicant shall incorporate drought-tolerant landscaping and water-efficient irrigation systems throughout the subdivision, and shall install in the houses low-flow toilets and water-efficient appliances.	
4.7-8: The project would place increased demands on the existing water conveyance and treatment system within the City of Pittsburg.	**4.7-8A:** Prior to issuance of an Engineering permit to construct subdivision improvements, the applicant shall provide the following: • Proof of the "de minimus" finding by the Contra Costa Water District; and • A plan for water facilities improvements to serve the project. This plan shall be subject to review and approval by the City Engineer. **4.7-8B:** Prior to issuance of a building permit for the first residence, the developer shall construct and have operational the following: • Adequate water facilities, acceptable to the City Engineer; and	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• The necessary on-site water storage infrastructure (such as a water tank or reservoir) to provide adequate water pressure for residential and fireflow use (minimum fireflow being 2,000 gpm for a duration of at least two hours) in accordance with Contra Costa County Fire Protection District standards.	
4.7-9: The project will result in increased demand on the wastewater collection system.	**4.7-9A:** Prior to issuance of the first residential building permit for the project, the applicant shall install the wastewater infrastructure needed to serve the project, subject to review and approval of the Public Works and Engineering Departments. Specific requirements are as follows: • Install a sewer main from the project site to hook-up with the existing main located at the intersection of West Leland Road and Bailey Road; and • Contribute a fair-share amount toward the construction of necessary trunk line improvements within the City necessary to meet projected demand under General Plan buildout conditions. **4.7-9B:** To adequately provide wastewater conveyance within the DDSD collection system, the applicant shall pay the DDSD conveyance system fee (currently $245 per single-family unit).	Yes
4.7-10: The project will result in increased wastewater treatment demand.	**4.7-10:** The applicant shall be subject to a DDSD connection fee to defray future wastewater treatment plant expansion costs (this fee is currently $3,000 per unit).	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.7-11: The project is anticipated to result in placing water and sewer mains in road right-of-ways, which can present traffic safety issues, as well as road capacity and geotechnical issues.	**4.7-11:** The applicant shall obtain an encroachment permit for all work performed in road right-of-ways. The application for the permit shall be subject to review and approval by the City Engineering Department and shall incorporate traffic control plan (TCP) measures consistent with City Engineering Department guidelines, which include but are not limited to the following: • Lane closures scheduled outside of weekday peak hour commute travel times; • Details of measures for traffic safety (including flagging traffic, flashing arrow signs, and a performance standard for street sweeping); • Special measures for work at intersections and in front of driveways to minimize disruptions; • Measures for protection of work areas left open overnight; • Geotechnical criteria for backfilling trenches, base rock and pavement; and • Provision of safe pedestrian and bicycle access through or around the construction area.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
BIOLOGICAL RESOURCES		
4.8-1: Proposed development would adversely affect a number of special-status animal species, including California tiger salamander and several species of raptors.	**4.8-1A:** The applicant shall obtain all permits required by the USFWS, CDFG, RWQCB, Corps, and U.S. Environmental Protection Agency (e.g., 1600 series permits, 404 and 401 permits, incidental take permits and any others) and implement mitigation measures, as required by federal and state law, to reduce, offset, or avoid impacts to any species listed under either the state or federal Endangered Species Act or protected under any other state or federal law. The applicant shall consult with the agencies referenced above throughout the project development process to identify any and all permit requirements, with which the applicant shall comply. If so instructed by the agencies referenced above, the applicant shall consult with necessary state and federal wildlife agencies prior to obtaining permits. Evidence that the applicant has complied with the requirements of these agencies shall be submitted to the City's Engineering Department prior to issuance of any grading or building permits for the project. **4.8-1B:** The wet meadow habitat in the northeastern portion of the site shall be enhanced as habitat for special-status amphibians and other wildlife. If cattle are to be retained in the proposed open space on site, the cattle shall be restricted outside the wet meadow habitat, with livestock watering provided through a pipe and trough directed outside of jurisdictional habitat. Any detention basin or pond constructed on the site shall be at least partially fenced with livestock fencing to exclude livestock from at least 50 percent of the shoreline when surface water is present.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.8-1C: An educational and interpretive program shall be developed and implemented as part of the mitigation designed by the applicant's consulting biologist to prevent harassment of special-status amphibians and other wildlife by future residents and their pets. This shall include signage prohibiting pets in the wetland and pond vicinity and informing residents of the sensitivity of the habitat. **4.8-1D:** The following pre-construction surveys shall be conducted to reduce the likelihood that any special-status species might be harmed during initial grading and construction: • Pre-construction surveys shall be conducted prior to initiation of ground disturbing activities to confirm absence of any occupied San Joaquin kit fox dens. The surveys shall be conducted by a qualified biologist according to the latest USFWS protocol, and shall serve to prevent the potential that a kit fox may be harmed during construction. Results of each survey shall be submitted to the USFWS and the CDFG. If there is evidence of occupied burrows within the construction area, the qualified biologist shall immediately contact USFWS and protective measures implemented, per USFWS protocol: – If occupied dens are located within the immediate construction area, each den shall be flagged. Den removal to avoid take of individual kit fox shall be accomplished according to USFWS guidelines.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	– Occupied dens found outside the development footprint but within 200 feet of construction or construction-related activities shall be encircled by protective exclusion zones which shall be clearly flagged. A qualified biologist shall be responsible for monitoring to ensure avoidance and to implement any necessary corrective measures during construction. In addition, the qualified biologist shall implement an employee education program on measures taken to reduce impacts to the species during construction. The monitor shall submit a post-construction compliance report to USFWS within 45 calendar days of completion of each major project component. • Pre-construction nesting surveys for horned lark, loggerhead shrike and raptors shall be conducted if initial grading for the project is to be conducted during the months of April through July prior to any destruction of suitable nesting habitat. The surveys shall be conducted by a qualified biologist no more than 30 days prior to initiation of grading. If any of these species are found within the construction area after April of the construction year, grading and construction in the area shall either stop or continue only after the nests are protected by an adequate setback approved by a qualified biologist. If avoidance of nests is not feasible, impacts on kite, shrike, and raptor nests shall be minimized by avoiding disturbances to the nest location during the nesting season unless a qualified biologist verifies that the birds have either a) not begun egg-laying and incubation, or b) that the juveniles from those nests are foraging independently and capable of independent survival at an earlier date.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Pre-construction surveys shall be conducted for burrowing owl within 30 days of project-related ground-disturbing activities throughout the year to determine whether any nesting owls are present and to provide for their protection during the active breeding season or passive relocation during the non-breeding season if nests are encountered. The surveys shall be conducted by a qualified biologist and shall comply with the latest version of the *Burrowing Owl Protocol and Mitigation Guidelines*.	
4.8-2: Proposed development would result in the elimination of 3.06 acres of jurisdictional wetlands and 0.06 acre of unvegetated "other waters."	**4.8-2A:** The jurisdictional wetlands shall be preserved, restored and enhanced as part of designated open space on the site, as recommended in Mitigation Measure 4.8-1B. This shall include relocating proposed residential use and access off of Bailey Road, rerouting the alignment of the proposed water supply line, and relocation of the proposed California tiger salamander breeding pond to avoid the wetland complex. Possible use of the existing wetlands as part of a combined detention basin function shall consider the short- and long-term effects on wetland habitat required for installation and maintenance. Continued livestock access to the wet meadow area or any basin or pond constructed in the vicinity shall include consideration of the adverse effects of concentrated use on wildlife habitat values and include appropriate restrictive fencing.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	4.8-2B: The proposed California tiger salamander breeding pond to be established in the northeastern portion of the site shall also be sited to avoid the existing jurisdictional wetlands. The existing wetlands shall be enhanced by at least partially restricting livestock outside a minimum of 50 percent of this feature or any basin or pond created in the vicinity. Construction activities shall be restricted and controlled as necessary to prevent inadvertent fill and disturbance to existing wetlands. Any loss or temporary disturbance required as part of establishing the new breeding pond shall provide for restoration or replacement wetlands as part of the mitigation plan required under Mitigation Measure 4.8-2C. **4.8-2C:** Where avoidance of jurisdictional wetlands is not feasible, a detailed wetland protection, replacement, and restoration program shall be prepared by a qualified wetland consultant which meets with the approval of the City, the RWQCB, the Corps, and the CDFG. The wetland plan shall clearly identify the total wetlands and other jurisdictional areas affected by the project, and shall provide for re-establishment, enhancement, and/or replacement of wetland habitat lost as a result of proposed development. Details of the plan shall include the following: • Identify the location(s) of mitigation areas. Mitigation for loss of existing wetlands shall be provided at a minimum replacement ratio of 1:1, and shall result in created or restored wetlands with a higher habitat value. • Replacement wetlands shall be consolidated to the degree possible to improve the value of the currently scattered seeps.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Specify performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be provided for a minimum of five years and continue until the success criteria are met. • Define site preparation and revegetation procedures, an implementation schedule, and funding sources to ensure long-term management of the overall wetland mitigation plan. **4.8-2D:** The applicant shall prepare a detailed erosion and sedimentation control plan and implement the provisions of that plan during construction on the site. The plan shall contain detailed measures to control erosion of stockpiled earth and exposed soil, provide for revegetation of graded slopes before the first rainy season following construction, and specify procedures for monitoring of the plan's effectiveness. Also refer to Mitigation Measure 4.2-5 in Section 4.2: Geology/Soils/Seismicity.	
4.8-3: Proposed development and mitigation would eliminate most of the wet meadow and freshwater marsh natural communities from the site.	**4.8-3:** Mitigation Measures 4.8-2A through 4.8-2D apply to this impact as well.	Yes
4.8-4: Development would obstruct opportunities for wildlife movement across the site and in the surrounding undeveloped lands of the southwest hills.	**4.8-4:** The proposed project design shall be revised to protect sensitive habitat features and maintain opportunities for wildlife movement across the site to undeveloped lands to the west and east. These shall include the following modifications:	No

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Preserve, restore and enhance the existing wetland complex in the northeastern corner of the site for use by special-status amphibians and other wildlife. As described in Mitigation Measure 4.8-1B, cattle shall be restricted from the wetland and a program developed and implemented to prevent harassment and inadvertent take of wildlife by future residents and their pets. The proposed water supply line shall be rerouted outside the preserved and enhanced wetland complex. • Establish the northern drainage as a wildlife movement corridor and habitat mitigation area for California tiger salamander, and burrowing owl. The proposed detention basin shall be restricted outside the northern drainage to maintain its function as a movement corridor for wildlife. • Minimize road improvements in the northern drainage to avoid disruption of existing habitat. The vehicle and water supply line access to the future tank shall be restricted to the alignment of the existing fire road which continues up the drainage in a northwesterly direction. • The existing drainage culvert shall be redesigned as a natural drainage feature with a low flow channel to improve its suitability as a safe movement corridor for wildlife.	

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Modify proposed residential lots and roadways in the southwestern corner of the site to provide a minimum 100-foot-wide undeveloped upland corridor for wildlife south of the site and north of the chain-link fence along the Concord Naval Weapons Station property boundary. Fencing at the rear of proposed lots in this location shall be restricted outside this 100-foot setback to maintain a movement corridor for wildlife. • Revise project plans to restrict housing and associated improvements to the south side of the northern drainage area.	
4.8-5: Proposed development would conflict with local policies protecting biological resources.	**4.8-5:** Mitigation Measure 4.8-4 applies to this impact as well.	No
CULTURAL RESOURCES		
4.9-1: Previously undiscovered cultural resources may be unearthed during construction on the project.	**4.9-1:** Should archaeological materials be uncovered during grading, trenching or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped. The City of Pittsburg shall be notified within 24 hours and an archaeologist who is certified by the Society of Professional Archaeology (SOPA) shall be retained by the developer to evaluate the significance of the find and suggest appropriate mitigation(s), if deemed necessary. Significant cultural materials include, but are not limited to, aboriginal human remains, chipped stone, groundstone, shell and bone artifacts, concentrations of fire-cracked rock, ash charcoal, shell, bone, and historic features such as privies or building foundations.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
VISUAL QUALITY		
4.10-1: The proposed project is inconsistent with General Plan policies pertaining to grading and retaining natural creek channels.	**4.10-1A:** The development plan shall be redesigned to retain the northern drainage. (Also refer to Mitigation Measure 4.8-4 in the Biological Resources section.) **4.10-1B:** The applicant shall provide a grading plan that provides some terracing of the hillsides to avoid large expanses of flat pad areas.	Yes
4.10-2: The placement of Lots 183–190 is inconsistent with City policies relating to hillside development.	**4.10-2:** Provide single-loaded streets and have the houses facing out towards Bailey Road.	Yes
4.10-3: The proposed project would be visible from Bailey Road when traveling in either direction.	**4.10-3:** The proposed project shall be redesigned to incorporate the following site planning measures to reduce visual impacts: • Eliminate the lots in the northern drainage and adjacent to Bailey Road. This would preclude the necessity to build a soundwall, which is not in keeping with maintaining a rural character along Bailey Road, and would also help to mitigate noise and the loss of habitat as discussed in the Noise and Biological Resources sections. • Increase the setback along the Bailey Road frontage. • Provide single-loaded streets and have the houses facing out towards Bailey Road.	Yes
4.10-4: Grading scars will be visible where major cuts and fills are proposed.	**4.10-4:** Mitigation Measures 4.2-2A through 4.2-2K would apply to this impact.	Yes

Significant Impact	Mitigation Measures	Does Implementation of the Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
4.10-5: A water tank will be constructed on an east-facing ridge in the northwest corner of the project site, overlooking Bailey Road. The water reservoir presents a potentially significant visual impact in an otherwise undeveloped open space area.	**4.10-5:** The proposed reservoir shall be a buried, steel-reinforced concrete tank. No more than 3 feet of the reservoir shall extend above pad level (max). Additionally, aggressive erosion control measures shall be employed to revegetate graded slopes created for reservoir construction, including the service road.	Yes

2
PROJECT DESCRIPTION

2
PROJECT DESCRIPTION

PROJECT LOCATION

The 122-acre project site is located in the hills at the southern edge of the City of Pittsburg, in Contra Costa County, west of Bailey Road north of the Concord Naval Weapons Station. It is located in the unincorporated area of Contra Costa County, but within the City of Pittsburg Planning Area, approximately two miles south of the Bailey Road/State Route 4 (SR 4) interchange. The site is irregularly shaped with its eastern boundary bordered by Bailey Road and its western boundary bordered by the Concord Naval Weapons Station. The project site is comprised of a single parcel: APN 097-230-005. (Refer to the Site Location Map in Figure 2-1 and the aerial photo in Figure 2-2.)

SITE CHARACTERISTICS

The site is vacant and presently used for cattle grazing. The only structure on the site is a windmill used to pump water for cattle. The parcel consists of northeast-trending ridgelines separated by steep-sided ravines. Elevations vary from approximately 510 feet in the northeast corner of the property to 990 feet at the extreme north end of the site. The site contains three northeast-trending ravines that make up the headwaters of Lawlor Creek. The creek eventually flows into the San Joaquin River, approximately 7.5 miles north of the project site. On-site soils primarily consist of a clay and silty/clay/loam mixture.

Non-native grassland predominates the project site with a wet meadow and freshwater marsh located along the headwaters of Lawlor Creek in the northeastern portion of the property. The site is void of tree cover with the exception of two native California buckeye trees located along the north-facing slope in the northern drainage.

PROJECT DETAILS

The application before the City of Pittsburg is for approval of a Prezoning, Annexation, Sphere of Influence Boundary Change, Vesting Tentative Map, and Design Review. The applicant is proposing to develop 122 acres with 319 single-family residential units (the "Project"). The applicant is seeking to prezone the property RS (Residential Single Family). The prezoning designation would bring the proposed project into conformance with the City's General Plan designation of Hillside Low Density Residential (1 to 5 units per gross acre), Park and Open Space.[1] The application requires Local Agency Formation Commission (LAFCO) approval of annexations to the City of Pittsburg and to the service areas of the Delta Diablo Sanitation District and Contra Costa Water District.

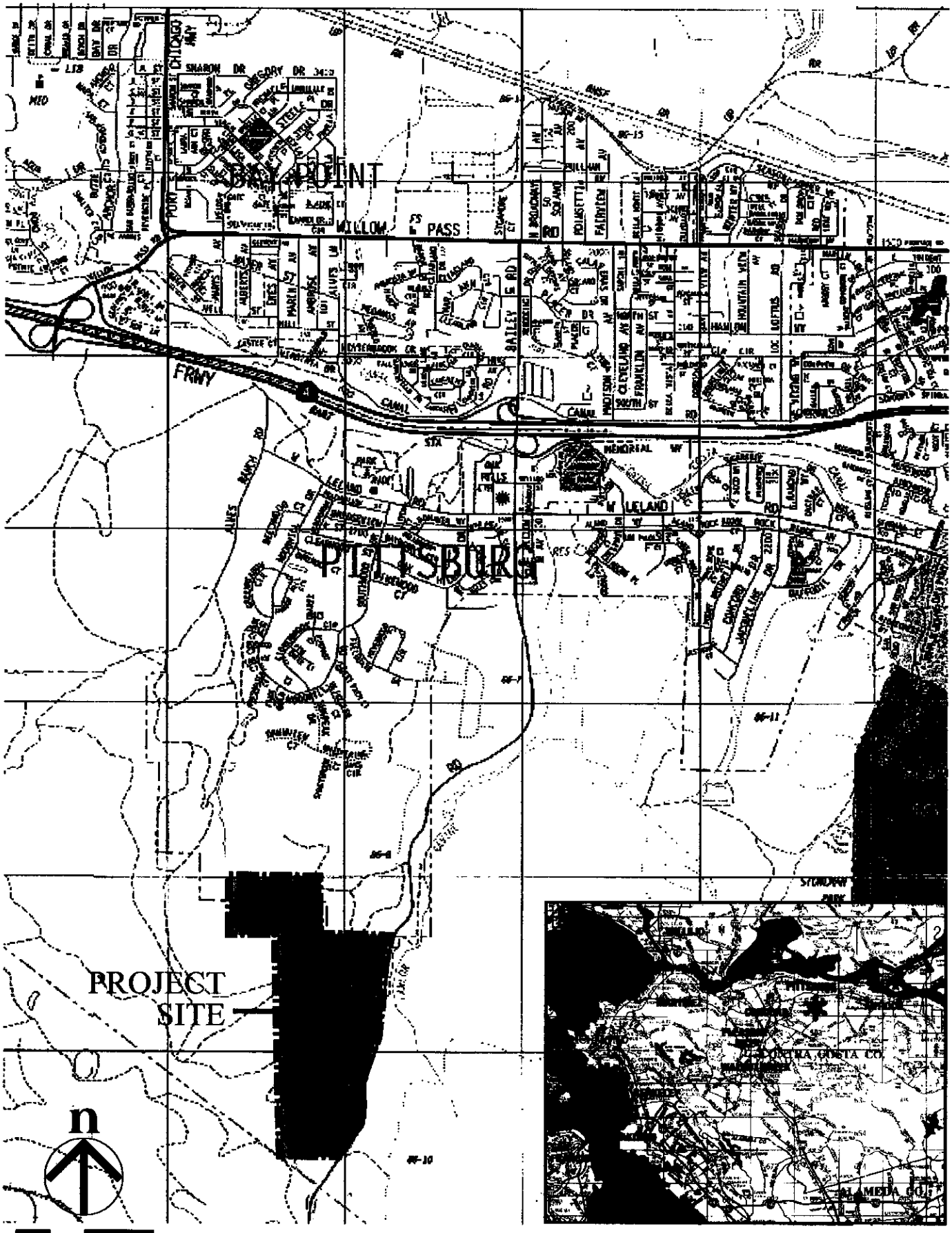


Figure 2-1 Site Location Map and Regional Setting

Graphic Scale:
0 250' 500' 1000'

Source: Pacific Aerial Surveys

Figure 2-2 Aerial Photo of Project Site

As shown in Figure 2-3 on the next page, the development area would be accessed from Bailey Road through two entrance streets. With the exception of the siting of a water tank, the northern portion of the site would remain in open space. Lot sizes would range from 6,000 square feet to 14,000 square feet, with an average lot size of 8,000 to 9,000 square feet. A loop roadway system would extend throughout the development with both access streets intersecting this roadway. Several smaller streets would provide internal access within the project. All of the project roadways would be double-loaded (serving both sides of the street) and will be public streets.

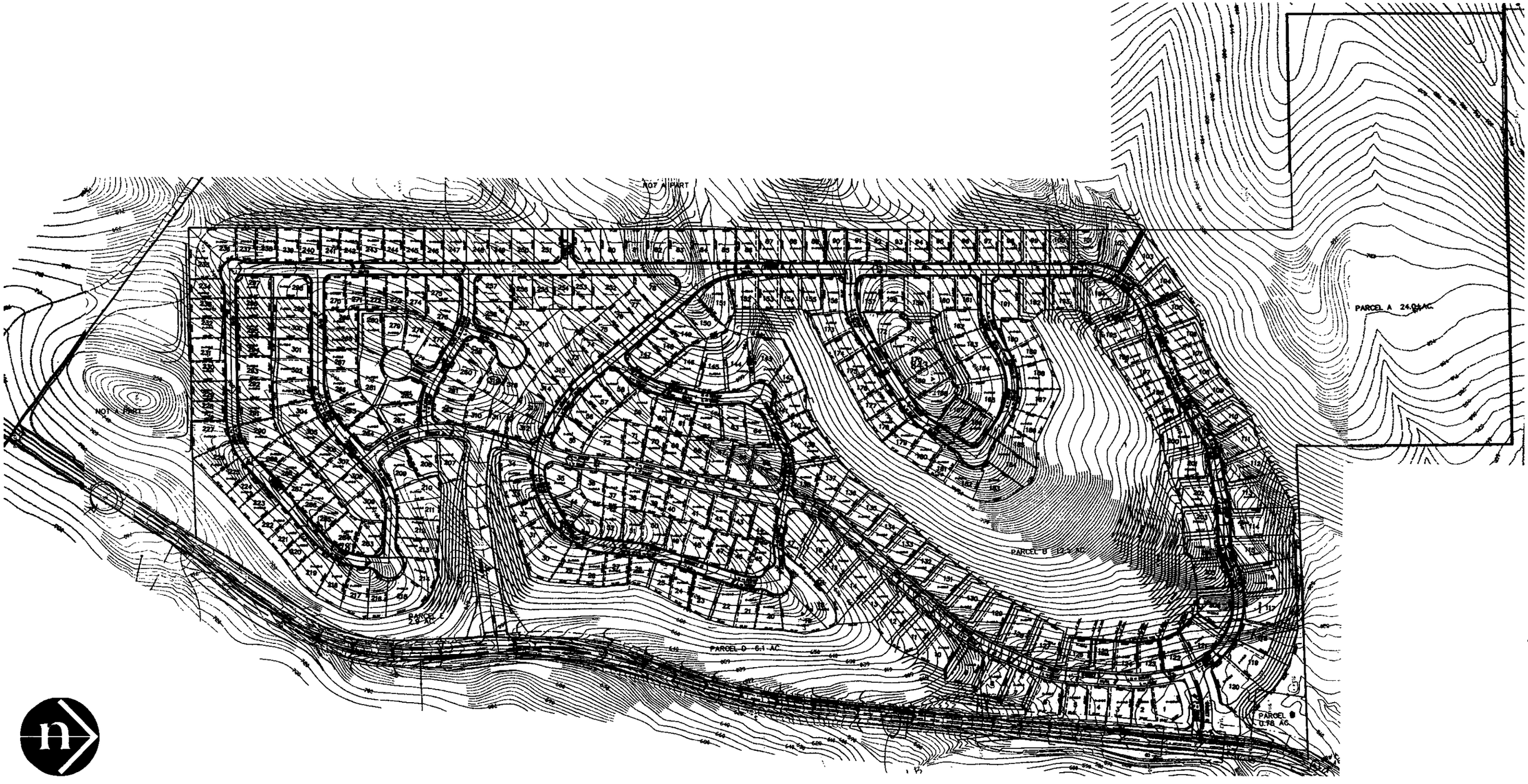
Mass grading would allow for construction of padded lots. Specifically, the grading concept is to lower the elevation of ridge crests, and place fills in the drainage swales between ridges. No hillside or split-level lots are proposed, and all lots would have nearly level, useable rear yards. The site plan indicates a typical lotting plan. Hillside buffer areas have been set aside between Bailey Road and Lots 215 through 226 and between Lots 16 and 30. A 12.5-acre area on the north/northeast-facing slope in the northern section of the development would be left as open space. This area separates the lower portion of the development fronting Bailey Road and the houses located at the top of the slope.

Grading of the site would include major cuts and fills of which the maximum depth of cut is approximately 80 feet and the maximum fill thickness is approximately 70 feet. Three drainage swales are proposed for fill to accommodate either house sites or roadways. The plan would eliminate the existing marsh and wet meadow area located adjacent to Bailey Road. Grading would be required in the northerly portion of the parcel to accommodate a water tank and service road. The roadway is located between Lots 104 and 105 and would extend across the slope in a northwest direction to the water tank.

PROJECT SPONSOR'S OBJECTIVES

The following objectives were provided by the applicant in support of the proposed development[2]:

- To plan an up-scale single-family detached subdivision with large flat lots that range in size from 6,000 to 14,000 square feet as a community of significant benefit to Pittsburg and the nearby region.
- To provide housing opportunities that include an executive-style subdivision with large two-story homes, pool-sized yards, areas for gardens and play yards, and sweeping views of the adjacent hills within easy access to work, shopping, recreation and BART.
- To provide housing that will improve the area's jobs/housing balance.
- To provide adequate services to meet the needs of future residents in a timely manner.
- To encourage unique, imaginative architecture and site design which integrates into a setting that is well planned and environmentally sensitive.



Graphic Scale:

0 100' 200' 400'

Source: CSW/Stuber-Stroeh Engineering Group, Inc. Consulting Engineers

Figure 2-3 Proposed Site Plan

- To create a community that is water and energy efficient.
- To provide substantial open space that enhances wildlife habitat and corridors, and to preserve, protect and enhance major drainages and wetlands.

REQUIRED APPROVALS

Development of Bailey Estates will require a number of approvals from federal, state and local agencies. These approvals will be required prior to developing the site. Specific permits and approvals are listed in Table 2-1 on the next page.

RESPONSIBLE AGENCIES

A responsible agency is a public agency, other than the lead agency, that has discretionary approval of the project. Prior to acting on or approving a project, a responsible agency must consider the lead agency's EIR. The Notice of Preparation and the Draft and Final EIRs are reviewed by all responsible agencies. Responsible agencies for the Bailey Estates development include the following:

Local Agencies and Special Districts

Contra Costa County Local Agency Formation Commission
Contra Costa Water District
Delta Diablo Sanitation District

State Agencies

California Department of Fish and Game
California Regional Water Quality Control Board

Federal Agencies

U.S. Army Corps of Engineers
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service

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[1] *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

[2] John Stremel, project applicant, written communication, May 2001.

Table 2-1
Required Approvals

Agency	Action	Timing
LOCAL AGENCIES		
City of Pittsburg Planning Commission and City Council	• Certification of Environmental Impact Report	• Prior to Prezoning and Vesting Tentative Map and Design Review approval
	• Approval of Prezoning, Vesting Tentative Map, and Design Review	• Prior to LAFCO approval of annexation
Contra Costa Water District	• Comment to City and LAFCO	• When City initiates annexation application and at LAFCO hearing
Delta Diablo Sanitation District	• Recommendation by District Board for annexation	• Upon approval of project by City of Pittsburg
Contra Costa County Local Agency Formation Commission (LAFCO)	• Change in Sphere of Influence	• After approval of prezoning by City Council
	• Approval of Annexations	• After receiving input by Delta Diablo Sanitation District and Contra Costa Water District
	• Detachment from Ambrose Recreation and Park District	• After approval of prezoning by City Council
STATE AGENCIES		
California Department of Fish and Game	• Streambed Alteration Permit	• Prior to grading
California Regional Water Quality Control Board	• Water Quality Certification	• Prior to grading
FEDERAL AGENCIES		
U.S. Army Corps of Engineers	• Section 404 Permit	• Prior to filing Final Map
U.S. Fish and Wildlife Service	• Formal consultation to render Biological Opinion	• Prior to filing Final Map
U.S. Bureau of Reclamation	• Approval of inclusion in Central Valley Project water supply service area	• Prior to filing Final Map

3
PLANNING POLICY

3
PLANNING POLICY

SETTING

Zoning

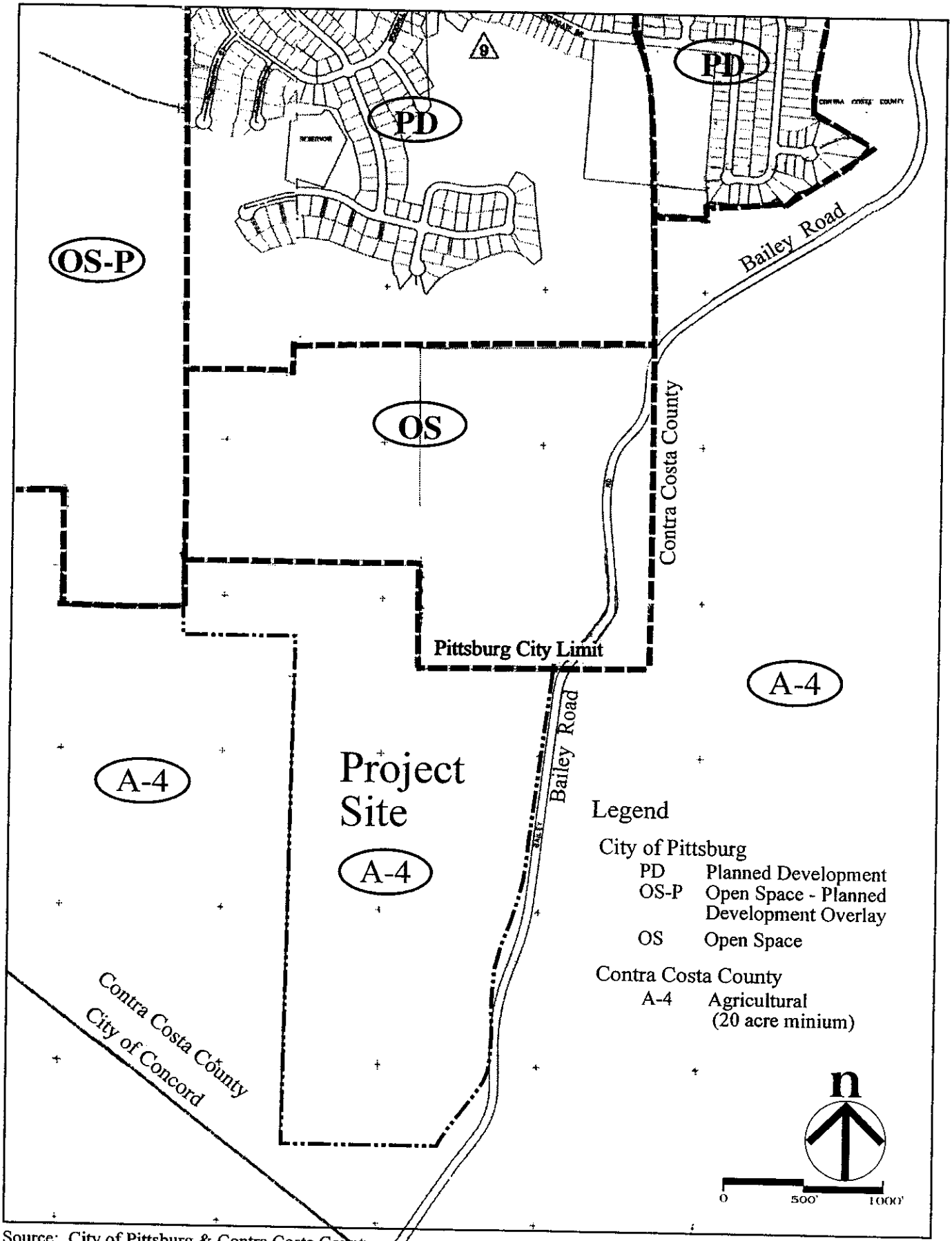
The project site is located within the unincorporated area of Contra Costa County and, as such, is regulated by County zoning regulations. The zoning designation is A-4 (Agricultural Preserve District, 20-acre minimum lot size) at the project site and on lands directly abutting the property to the west and east of Bailey Road. Nearby lands within the City of Pittsburg are designated OS (Open Space) or PD (Planned Development). Figure 3-1 illustrates the zoning designations in the project vicinity. Upon annexation to the City of Pittsburg, the site would be zoned RS (Residential, Single Family). The RS district designation would be consistent with the existing City General Plan land use designation of Hillside Low Density Residential.

General Plan

Background

The intent of the General Plan is to serve as a guide for the comprehensive long-range development of an area. The plan has written text containing policies in the form of goals, objectives and implementation measures, accompanied by a map or series of maps. Pittsburg's General Plan[1] addresses issues related to physical development, growth and conservation of resources in the City's Planning Area. The plan:

- Outlines a vision of long-range physical and economic development, and hillside and resource conservation that reflects the aspirations of the community;
- Provides strategies and specific implementing actions that will allow this vision to be accomplished;
- Establishes a basis for judging whether specific development proposals and public projects are in harmony with General Plan policies and standards;
- Allows City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards; and
- Provides the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Zoning Ordinance, specific plans, and the Capital Improvement Program.



Source: City of Pittsburg & Contra Costa County

Figure 3-1 Zoning Map

The City of Pittsburg has experienced substantial growth since 1988, when its previous General Plan was prepared. While preparing its recently adopted General Plan, the following key points were considered:

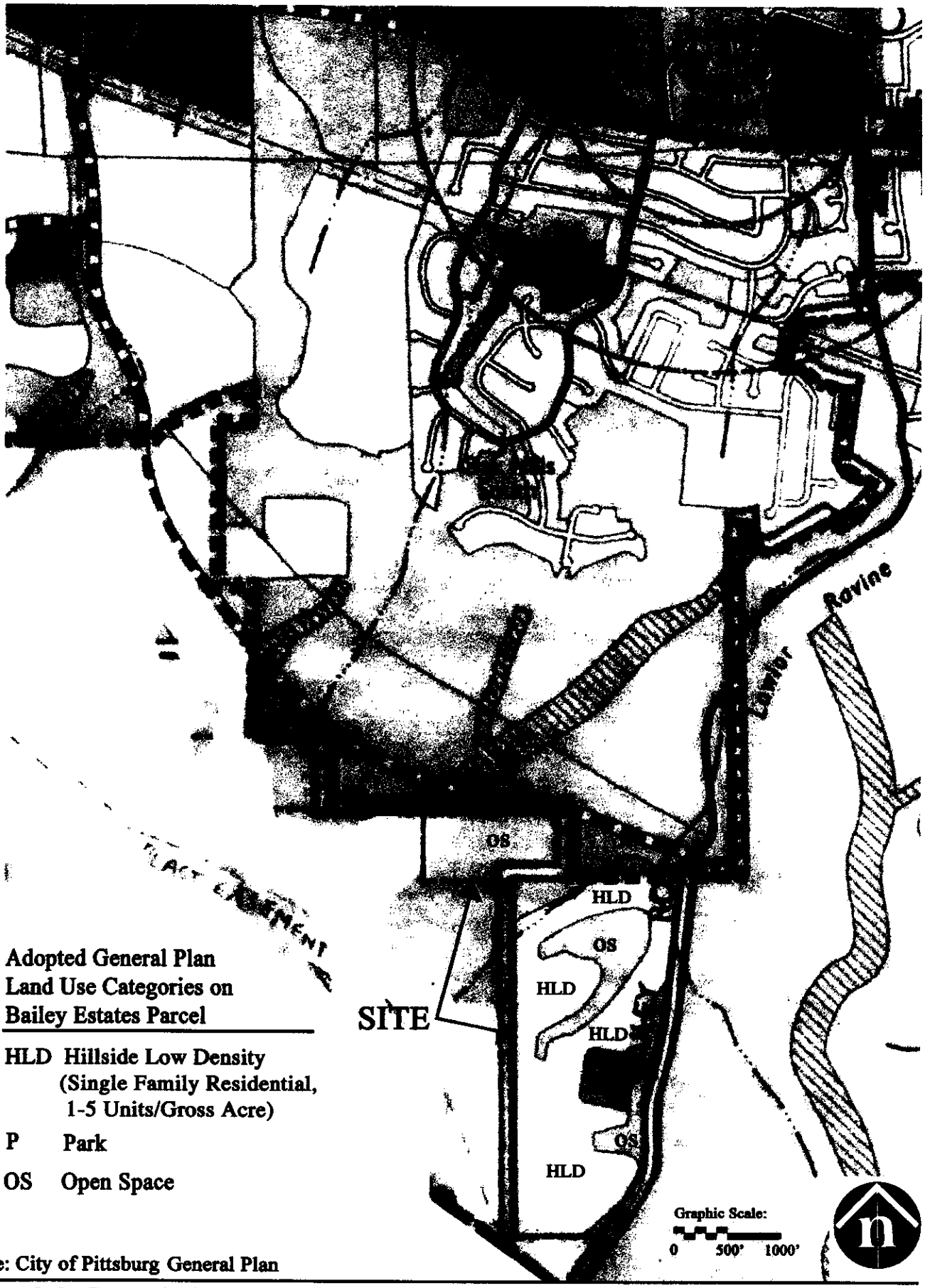
- Preparing a General Plan that responds to the City's current planning context and its vision for the future;
- Articulating a strategy for growth and development that provides a sound basis for decision making for detailed studies (such as specific plans), annexations, and project approvals;
- Ensuring that the plan supports the City's objectives for economic development, and outlining strategies for revitalizing downtown and other infill areas;
- Balancing development and conservation in the hillsides;
- Linking land use, transportation and infrastructure; and
- Ensuring that General Plan policies are mutually supportive, internally consistent and in accordance with state law.

The General Plan contains several major components that are relevant to the proposed project, including Land Use, Growth Management, Transportation, Youth and Recreation, Resource Conservation, Health and Safety, Public Facilities, and Noise. It also contains goals and policies that are not relevant to the proposed project but address other components such as the downtown area and economic development. State law requires that all parts of the General Plan comprise an integrated, internally consistent and compatible statement of policies. Thus, in reviewing a development proposal, it is necessary to review all of the relevant components. Policies related to land use and growth management that are applicable to the project are discussed below in the Impacts and Mitigation Measures section. Policies pertaining to Transportation, Youth and Recreation, Resource Conservation, Health and Safety, Public Facilities, and Noise are discussed throughout Chapter 4.

General Plan Land Use Designation

The County General Plan designation for the project site is Agriculture/Open Space. The City's General Plan designation for the project site is Hillside Low Density Residential, Open Space, and Park. Figure 3-2 illustrates the City's General Plan Land Use Map. General Plan policy allows for a maximum density of 5 dwelling units per gross acre within the Hillside Low Density land use category. The General Plan further states that "maximum densities" should be allowed only in flatter natural slope areas or non-environmentally sensitive level areas. The plan goes on to clarify that "[a]n open, natural character should be encouraged by clustering homes and minimizing cut and fill of natural hillsides" (page 2-16). For the 319-unit project, the calculated density is 4.2 units, based on a developable area of 76.5 acres.

The Open Space land use classification accommodates any greenbelts and/or urban buffer areas that may be designated in the future. The General Plan provides two primary criteria that identify lands as open space.[2] These are:



Source: City of Pittsburg General Plan

Figure 3-2 General Plan Land Use Map

Resource Conservation. Includes sites with environmental and/or safety constraints, such as riparian corridors, sensitive habitats, and wetlands. Development is limited to one housing unit per existing legal parcel, and no construction is allowed on land within the parcel that is unsuitable for development.

Agriculture and Resource Management. Includes orchards and cropland, grasslands, incidental agricultural or related sales, and very low-density rural residential areas, not to exceed one housing unit per 20 acres. One housing unit may be built on each existing parcel and agriculture is allowed with fewer restrictions on keeping animals than in the residential classification.

Permitted residential development may be clustered in locations with little or no environmental constraints. However, land area with this designation is not to be used in calculating allowable development.

Transportation

The Transportation Element of the General Plan identifies long-range future transportation needs, primarily through policies and standards to enhance capacity and provide new linkages to further an integrated multi-modal transportation system.

The roadway within the City is based around a conventional suburban hierarchy of streets. The top of the hierarchy consists of arterial streets that carry large volumes of traffic, while the bottom consists of low-volume local streets intended to provide access to adjacent property. Definitions of the roadway classifications are presented below, while more specific classification standards relating to intersections, driveways, on-street parking, and traffic volumes are presented in Figure 3-3. An aerial photograph of the roadway system, including planned arterials serving the southwest portion of the City, are shown in Figure 3-4. It should be recognized that the precise alignments of the planned arterials are not defined until design studies are performed.

- ***Freeways.*** Freeways are limited-access, high-speed travelways included in the State and Federal highway systems. Their purpose is to carry regional through-traffic (traffic passing through Pittsburg without stopping). Access is provided by interchanges spaced one mile or greater. No access is provided to adjacent land uses. State Route 4 (SR4) is the only freeway connecting the City of Pittsburg to regional destinations.
- ***Major Arterials.*** Major arterials primarily serve through-traffic. They are generally multi-lane facilities with signalized traffic control at major intersections. Major arterials are typically divided facilities (with raised medians) that provide limited access to abutting development sites as a secondary function. Major arterial examples in Pittsburg include Railroad Avenue, Kirker Pass Road, Bailey Road and Leland Road.

	Function	Traffic Lanes[1]	Intersections	Driveways	Left-Turn Pockets	On-Street Parking	Traffic Speed	Traffic Volume[2]
Major Arterial	Primary function is to provide mobility. Secondary function is to provide access. Provides circulation between neighborhoods, activity centers, and highways and other regional routes.	2-6	Minimum number of intersection is preferred. Traffic signals required where warranted.	Driveways are generally not permitted, but may be allowed subject to restrictions. Driveways to major generators should be consolidated, preferably at signalized intersections.	Preferred	Not desirable	Moderate to High 35-50 mph	Moderate to High 15,000-55,000 VPD
Minor Arterial	Provide balance between mobility and access. Carry a mix of local and regional traffic. Provides circulation between neighborhoods, activity centers, and highways and other regional routes.	2-4	Minor arterials allow a higher level of access than major arterials. Traffic signals required where warranted.	Driveways are generally not permitted, but may be allowed subject to restrictions. Driveways to major generators should be consolidated, preferably at signalized intersections.	Preferred	Not desirable	Moderate to High 35-50 mph	Moderate to High 15,000-40,000 VPD
Collector	Provides circulation within and between neighborhoods.	2-4	Allowed. Subject to restrictions.	Driveways are permitted subject to restrictions.	As traffic conditions require	Allowed. Subject to restrictions	Low to Moderate 30-35 mph	Low to Moderate 15,000 VPD or less
Local	Provides access to individual sites.	2	Least restrictive.	Driveways allowed.	No	Allowed. Subject to restrictions	Low 25-30 mph	Low 5,000 VPD or less

1 All streets shall have sidewalks.

2 MPH = miles per hour, VPD = vehicles per day

All street design parameters (cross-sections, pavement, intersection spacing, driveways, parking, etc.) are subject to traffic evaluation and conformance to city design standards.

Source: Pittsburg Community Development and Engineering Departments, 2000.

Figure 3-3 Roadway Classifications

Graphic Scale:

0 250' 500' 1000'

Source: City of Pittsburg/Pacific Aerial Surveys

Figure 3-4 Roadway System

- ***Minor Arterials.*** Minor arterials are intended to provide balance between mobility and access. They carry a mix of local and regional traffic, providing circulation between neighborhoods, activity centers, and highways and other regional routes. Minor arterials are typically two- to four-lane roadways that also provide access to adjacent development, often using signalized intersections for entry to major generators. Minor arterial examples in Pittsburg include Harbor Street and San Marco Boulevard.

Sphere of Influence and Planning Area

The project site is located outside the City's municipal boundary/Sphere of Influence, but within the City's planning area. The northern property line abuts the City's boundary/Sphere of Influence. Upon annexation of the site to the City, the boundary would be changed. The project is consistent with General Plan Policy 2-P-1, which calls for progressive annexation of property in the City's planning area.

The City's planning area encompasses the project site and extends to the boundary of the Concord Naval Weapons Station property to the south and west. To the east, the planning area borders the east side of the Black Diamond Mines Regional Preserve, following a line along Meekler Canyon where it jogs to follow the existing City municipal boundary north to Suisun Bay.

Urban Limit Line (ULL)

The County delineated an Urban Limit Line in 1990, which was set up for the purpose of identifying areas appropriate for urban expansion and preservation of open space. With the exception of the northwest corner of the project site, the property was included within the original ULL of 1990 and in the ULL revision of 1999 (65/35 County Map).

Local Agency Formation Commission (LAFCO)

California law mandates the establishment of Local Agency Formation Commissions (LAFCO) to administer the incorporation and annexation of cities and special service districts in California. The Contra Costa County LAFCO Board represents local county and city governments and special districts, and is charged with establishing spheres of influence (SOI) that represent ultimate and logical boundaries for city and service area annexations. In addition, applications to extend city boundaries or services are reviewed by the LAFCO in which the city or service district is located.

The applicant is requesting annexation of the project site to the City. In addition, the project site is located outside the service boundaries of the Contra Costa Water District and the Delta Diablo Sanitation District. Annexations to these districts will also be required, prior to project implementation, in order to provide water and wastewater service to the project.

IMPACTS AND MITIGATION MEASURES

Significance Criteria

This section uses criteria from CEQA Guidelines (2003) and standard professional practice to determine the level of significance of the environmental impact. An impact is considered to be significant if the project would conflict with any applicable land use plan, policy or regulation of the City of Pittsburg.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Project Consistency with Land Use and Growth Management Goals and Policies

IMPACT 3-1: The proposed project may be only partially consistent with a variety of land use polices contained in the General Plan.

Table 3-1 presents relevant polices contained in the Land Use and Growth Management Elements of the City's General Plan. As noted on the table, the project has been found to be only partially consistent with several polices pertaining to project visibility from Bailey Road and elimination of natural creekways and wetland area. Mitigation measures recommended in Section 4.10: Visual Resources, call for mitigating impacts of houses visible from Bailey Road, and maintaining the east- and north-facing slopes and the northern drainage in open space. Removing the lots in the northern drainage area would also help to mitigate for the loss of wetland and drainage ways. A full discussion of grading impacts, loss of wetland habitat and impacts on visual resources is found in Sections 4.2, 4.8 and 4.10, respectively.

- **MITIGATION MEASURE 3-1A:** Redesign the project to remove development in the northern drainage area, and reconfigure lots, add landscaping and increase street setbacks to minimize the visual impacts from Bailey Road.

- **MITIGATION MEASURE 3-1B:** Also refer to Mitigation Measures 4.1-2A through 4.1-2C, 4.7-1, 4.7-3, 4.7-5. 4.7-6, 4.8-1B, 4.8-2A, 4.8-4, 4.10-1B, 4.10-2 and 4.10-3.

Table 3-1

PLANNING POLICY CONSISTENCY

Goals/Objective/Policy	Consistency Determination	Discussion
LAND USE		
Citywide Policies		
Goals		
2-G-1 Maintain a compact urban form within the City"s projected municipal boundary. Ensure that hillside lands not environmentally suitable for development are maintained as open space.	Partially Consistent	Only the land located between the northerly drainage swale and the northern property line would remain in open space. The remainder of the site would be developed with single-family residences and roadways. To bring this project into consistency with the policy, contain residential development to the south of the northern drainage swale.
2-G-4 Provide a range of development intensities, with the highest intensities in downtown and in areas accessible by transit and services, and lower intensities in hillsides and at the City's southern edge.	Consistent	When calculating the developable portion of the site—122 acres—the density is 2.6 dwelling units per acre. The density range is 1.0 to 3.0 for low density residential (Policy 2-P-95).
2-G-5 Promote a diversity of housing types, including opportunities for hillside estate development, as well as smaller lot, infill, and high-density housing.	Consistent	The largest lots are 14,000 square feet which can be considered hillside estate. The average lot size ranges from 8,000 to 9,000 square feet, with the smallest lot approximately 6,000 square feet.
2-G-8 Ensure that hillside development enhances the built environment, improves safety through slope stabilization, is respectful of topography, and other natural constraints, and preserves ridgelines and viewsheds.	Partially Consistent	The project plan calls for extensive grading of the on-site hills to create level pad lots and development is noticeably visible from a major roadway. Refer to discussions in sections 4.2: Geology/Soils and 4.10: Visual Resources. Project consistency with this goal can be achieved through implementation of Mitigation Measures 4.8-1B, 4.8-2A, 4.8-4, 4.10-1B, 4.10-2 and 4.10-3, or redesigning the project as suggested in Alternatives 6.3, 6.4 or 6.5.
2-G-9 Exercise leadership in securing development and preserving open space consistent with the General Plan in portions of the Planning Area that will ultimately be inside the city boundaries.	Consistent	The proposed project is consistent with the General Plan Land Use Diagram; 54 percent of the site is preserved as open space.

Goals/Objective/Policy		Consistency Determination	Discussion
Growth Boundaries and Procedures			
Policy			
2-P-1	Review the City's Sphere of Influence (SOI) every 5 years. Ensure necessary annexation and Sphere of Influence changes through coordination with the County and Local Agency Formation Commission (LAFCO), according to the 10- and 20-year goals illustrated in Figure 2-3 (General Plan).	Consistent	The City incorporated the project site into its present planning area as shown on the General Plan Land Use Diagram.
Hillside Development			
Policies			
2-P-26	As a condition of approval, ensure that residential developers incorporate natural creeks as open space amenities into the design of residential neighborhoods.	Partially Consistent	Natural creekways and wetland area would be eliminated under the proposed plan. Project consistency with this policy can be achieved through implementation of Mitigation Measures 4.8-2A through 4.8-2C and 4.8-4, or a redesign of the project similar to that shown in Alternatives 6.3, 6.4 or 6.5.
2-P-27	Ensure that new hillside development utilizes fire-resistant building materials, per the Uniform Building Code. Require that all residential units adjacent to open slopes maintain a 30-foot setback with fire-resistant landscaping.	Unknown	Building materials to be determined during the design review process.
		Unknown	Project plans indicate that the edge of lots abut the open space area. Mitigation Measures 4.7-1C, 4.7-1D, 4.7-1F, 4.7-2A, and 4.7-2B would bring the project into consistency with this policy.
2-P-28	Minimize single-access residential neighborhoods in the hills; maximize access for fire and emergency response personnel.	Consistent	The project will have two main entrances and a circular on-site street pattern.
2-P-29	During development review, ensure that the design of new hillside neighborhoods minimizes potential land use incompatibilities with any grazing/agricultural activities in the southern hills.	Partially Consistent	The site plan shows that the lots on the western, southern and northern edge will directly abut grazing land. Mitigation Measures 4.1-2A through 4.1-2C would bring the project into consistency with this policy.

Goals/Objective/Policy	Consistency Determination	Discussion
PLANNING SUBAREAS		
Southwest Hills		
Goals		
2-G-31 Maintain the general character of the hill forms.	Partially Consistent	The hilltops would be removed to create flat pad lots. The remainder of the site would be mass graded as illustrated in Figure 4.2-6 in the Geology/Soils section. However, the northern portion of the site would remain essentially undeveloped.
2-G-32 Encourage development of higher-end, low-density residential neighborhoods.	Consistent	The applicant proposes higher-end, low density development.
Policies		
2-P-92 Allow Low Density residential development west of Bailey Road, as shown on the General Plan Diagram. Ensure that such development is minimally visible from Bailey Road and mitigates any impacts to creeks and wetlands in the area.	Partially Consistent	The development will be visible from Bailey Road when traveling in both directions. (Refer to Visual/Aesthetics section for a discussion of visual impacts and the Geology/Soils section for a discussion of site grading.)
GROWTH MANAGEMENT		
Goal		
3-G-1 Manage the City's growth to balance development of housing options and job opportunities, protection of open space and habitat areas, construction of transportation improvements, and preservation of high-quality public facilities.	Partially Consistent	The development provides housing opportunities and short-term job opportunities during construction. It does not protect all of the wetland habitat areas. Mitigation measures required of the developer would include transportation improvements. Project consistency with this goal can be achieved through implementation of Mitigation Measures 4.8-2A and 4.8-2B.

Goals/Objective/Policy		Consistency Determination	Discussion
Policies			
3-P-1	Allow urban development only in areas where public facilities and infrastructure (police, fire, parks, water, sewer, storm drainage, and community facilities) are available or can be provided.	Partially Consistent	As discussed in Section 4.7: Public Services and Utilities, the various City service providers can meet the standards called for in the General Plan; however, the site will need to be annexed to receive water and sewer service. The project does not include a park site which is inconsistent with the policy and the Land Use Map. Implementation of Mitigation Measure 4.7-6 would bring the project into conformance with the Land Use Map and Policy 3-P-1.
3-P-2	Prior to project approval, ensure that the existing and planned transportation systems will have adequate capacity to accommodate new urban development.	Consistent	The developer will be required to provide various transportation improvements as mitigation of project impacts. Refer to discussion in Section 4.4: Transportation and Circulation.

Performance Standards

The project's consistency with the performance standards for police and fire services, water, wastewater, drainage, parks/recreation facilities and schools is discussed throughout Section 4.7: Public Services and Utilities.

IMPACT 3-2: The project will require annexation to the City of Pittsburg and Delta Diablo Sanitation District. Additionally, the Local Agency Formation Commission (LAFCO) must approve an extension of Contra Costa Water District's (CCWD) service boundary to include the site, and the U.S. Bureau of Reclamation must include the site in CCWD's contractual service area for the receipt of Central Valley Project's water supplies. This is considered a *less-than-significant* impact.

Annexing the project site to the City of Pittsburg would appear to be considered leap-frog development given the distance of the site from the nearest development and open space lands surrounding the property. However, the project site's northern boundary abuts the City's municipal and Sphere of Influence boundaries. The site also has been considered within the City's planning area in the General Plan and, with the exception of the undeveloped area at the northwest corner of the site, is within the County's Urban Limit Line. Thus, annexation can be considered a logical extension of the municipal boundary.

Development will also require the extension of water and sewer services. Leap-frog development could be considered with these annexations as open space land, even though located within the city boundary, would separate the project site from development to the north. Typically, the service district boundaries coincide with city boundaries. Thus, the same argument can be made that since the project site is contiguous to the city boundary, annexation would not constitute leap-frog development.

Refer to Section 4.7: Public Services/Utilities for a full discussion of water and wastewater service.

❑ **MITIGATION MEASURE 3-2:** No mitigation is required.

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[1] *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

[2] Ibid., page 2-20.

4
ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4
ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4.1 LAND USE AND LAND USE COMPATIBILITY

Setting

The project site is located in the hills south of the Pittsburg city limits. As shown in the aerial photograph in Figure 2-2, the area surrounding the project site is void of development. To the west of the site, land is owned by the Seecon Financial & Construction Co., and to the south of the site, the land is owned by the Concord Naval Weapons Station. Both of these properties are set aside as part of a Federal *blast zone easement*. The property is leased for cattle grazing. To the east of the project site and across Bailey Road is the Keller Landfill. The landfill is sited behind ridgelines that buffer it from Bailey Road and the project site. The vacant land around the landfill is also used for cattle grazing. The nearest development as shown in Figure 2-2 is approximately 2,100 feet from the northern property line. The parcel separating the project site from the new development is also used for cattle grazing.

The Federal blast zone easement was established by the government in July 1976. A study conducted by the Navy concluded that a safety buffer zone was necessary around ordinance handling facilities to protect the public from explosions and as such, designated an area around the port where no human habitation could occur.[1] Additionally, no public roads or other facilities intended for use by the public are allowed in the blast zone easement. Upslope from the port area, easements were established to protect the public from the effects of munitions explosions originating within the interior of the Weapons Station. No development is permitted within the blast zone easement. Since munitions are no longer stored at the Weapons Station, an effort is underway to eliminate the blast zone easement which would avail the land for future development opportunities.

Impacts and Mitigation Measures

Significance Criteria

This analysis uses criteria from Appendix G of the California Environmental Quality Act (CEQA) Guidelines (2003) and standard professional practice to determine the level of significance of the environmental impact. An impact is considered to be significant if the project would substantially conflict with or be incompatible with existing adjacent land uses.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Blast Safety Zone

IMPACT 4.1-1: New houses would be located in close proximity to the Concord Naval Weapons Station blast zone easement. This is considered a *less-than-significant* impact.

As stated above, the blast zone easement was established by the Navy in an effort to provide a buffer between communities and the munitions storage areas contained within the Weapons Station property. The Navy acquired properties within a two-mile radius of the loading piers and established blast zone easements as a means of protecting the public from potential explosions.

The Navy is no longer storing munitions within the Weapons Station and the land is being considered for other uses. It is unlikely that residents of the project would be exposed to potential hazards as a result of future activity within the Weapons Station.

❑ **MITIGATION MEASURE 4.1-1:** No mitigation is required.

Urban/Rural Conflicts

IMPACT 4.1-2: Potential land use conflicts will occur between the urban development and the range land abutting the project site to the west and south, as well as within the project site between the development and open space lands.

Since no development would be occurring in the blast zone easement adjacent to the project site, it is assumed that the property will continue to be used for cattle grazing. The applicant has also indicated that cattle grazing may be allowed in the open space areas within the development.

When development occurs adjacent to undeveloped land, there is a tendency for homeowners to assume that the vacant land can be used for their own purpose, such as hiking, running dogs or dumping yard clippings. New residents also complain of agricultural odors, insects and dust, and noise if the land is tilled. Contra Costa County adopted a "Right to Farm" ordinance that protects ranchers from nuisance complaints. Since the adjoining land is located within the unincorporated area, the rancher(s) are protected by this ordinance.

Contra Costa County General Plan[2] Policy 3-12 encourages the preservation and buffering of agricultural land (grazing or range land) because it is critical to maintaining a healthy and competitive agricultural economy and assures a balance of land uses. The policy further states that it is the responsibility of the urban developers and residents to provide adequate buffers between

agricultural and residential uses, to control domestic pets, keep plant diseases and bush and tree seeds from blowing onto agricultural areas, and institute programs to protect agricultural land from trespassing and vandalism. The major problem associated with residences in close proximity to the grazing land is the threat of domestic dogs getting lose and chasing cattle.

The proposed development plan extends the building lots up to the property boundary. There is no indication on the site plan whether a fenced buffer will be provided that would prevent new residents or their pets from entering the adjoining properties, nor does the plan illustrate how the internal open space areas will be protected from intrusion by the residents. To provide a buffer area that would also meet Fire District requirements at the urban/rural interface, a double fence would be required. This double fencing would also prevent cattle from knocking down residents' backyard fences. The double fencing shall consist of a sturdy wire fence placed no more than three feet from the backyard fence that will be incorporated into the development. It will be necessary for the backyard fencing to be secured adequately to prevent dogs from digging under it and escaping into the grazing land.

It should also be recognized that project approval implies direct loss of approximately 100± acres of grazing land, along with the indirect effects of the residential project on the adjacent grazing land. This is considered a *significant and unavoidable* impact of the project.

All of the following mitigation measures are required to reduce impacts resulting from urban/rural conflicts to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.1-2A: The applicant shall submit a fencing plan as part of the improvement plan submittal. A double fence shall be provided wherever lots back up to grazing land. The double fence will consist of a sturdy wire fence separated no more than 3 feet from the development's backyard fencing.

4.1-2B: Concurrent with the recordation of the final map, a separate document shall be recorded informing residents of the "Right to Farm" ordinance.

4.1-2C: The applicant and/or developer shall provide a pamphlet to each new homeowner advising them of the necessity to stay out of the adjoining grazing lands. This pamphlet can also include information regarding the wetland area as recommended in 4.8: Biological Resources.

Also refer to the following impacts and mitigation measures (discussed in detail within their respective sections) that are relevant to land use: Impact 4.5-1, Noise and Land Use Compatibility; Impact 4.5-2, Interior Noise Levels; Impact 4.6-4, Odors (proximity to landfill); and Impact 4.7-2, Fire Protection Services (high fire danger).

Loss of Rangeland

IMPACT 4.1-3: Development of the site will contribute to the cumulative loss of rangeland. The loss of rangeland is considered a *significant and unavoidable* impact of the project.

The conversion of the project site from rangeland to urban development will incrementally contribute to the loss of rangeland in Contra Costa County. When development occurs on the city fringe or in the unincorporated area of the County, grazing land is lost forcing ranchers to either discontinue ranching or to find other grazing land outside the area. As ranchers move their grazing operations out of the area, a trickle down effect occurs such as the loss of businesses and services that support the ranching industry. While this project alone will not collapse the industry, it will cause an incremental increase towards the decline of the ranching industry in Contra Costa County. The loss of rangeland on the project site was analyzed in the cumulative loss of rangeland during the City's General Plan update and in the County's EIR on the 2000 ULL amendment. With the exception of the northwest corner, the project site is within the ULL.

❑ **MITIGATION MEASURE 4.1-3:** No mitigation is available.

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[1] Contra Costa County, Draft Environmental Impact Report, *Concord Naval Weapons Station General Plan Amendment and Road Vacation*, September 1988.

[2] Contra Costa County Community Development Department, *Contra Costa County General Plan 1995-2010,* adopted July 1996.

4.2 GEOLOGY/SOILS/SEISMICITY

Background

Previous Investigation

Hallenbeck & Associates, Inc., performed an initial investigation of the site and documented their findings in a report dated June 1, 1995.[1] Their scope of work included literature review, including the results of a previous investigation of the parcel performed by Geomatrix Consultants[2]; photointerpretation of the entire project area; and limited subsurface exploration. The subsurface exploration data for Bailey Estates development parcel presented in the Hallenbeck & Associates report includes 19 test pits, 22 test borings and 5 seismic refraction lines.

The stated purpose of the investigation performed by Hallenbeck & Associates, Inc. was to provide sufficient data to make a preliminary assessment of geologic and seismic geological hazards; provide general recommendations and criteria for site grading, drainage and foundation design; and provide geologic and geotechnical input into the constraints analysis which preceded formulation of the tentative subdivision map. The report states that the recommendations are only suitable for use as a project planning tool. Specific standards and criteria for construction projects will require supplemental geotechnical studies, which will be performed later in the planning process.

Engeo, Inc., was retained to evaluate the water reservoir site and provide data on geologic conditions along the alignment of mains linking the proposed tank site with existing water distribution facilities along Bailey Road. The scope of the Engeo investigation included review of pertinent literature, geologic interpretation of aerial photographs, geologic reconnaissance of the proposed water distribution facilities, excavation and logging of ten test pits and three trenches that were located in the area of the water tank site and the access road alignment. The Engeo report, dated March 30, 2001,[3] presents engineering analysis of field and laboratory data, along with an assessment of geologic hazards and general recommendation for foundations and grading.

In 2003, Engeo performed a geotechnical analysis of the proposed detention basin embankment on the west flank of Bailey Road.[4] The investigation included review of previous geotechnical reports, a site visit, slope stability modeling, engineering analysis of the data gathered, and preparation of standards and criteria for the construction of the embankment. The slope stability analysis included model runs for a broad range of conditions (e.g., reservoir full, reservoir empty, rapid draw down, static conditions, pseudostatic conditions). The primary conclusion of the report is that if soft clayey material along the west flank of Bailey Road is removed, and a *keyway* excavated and backfilled with a select fill (derived chiefly from sandstone), a 2:1 slope up to 30 feet in height will provide an adequate level of safety.

The City of Pittsburg's Municipal Code makes provision for triggering geologic, seismic and geotechnical reports during the subdivision review process. Specifically, it enables the City to require design-level investigations as a condition of approval. The Municipal Code also makes provisions for requiring additional geologic and geotechnical studies during the processing of

grading and building permits. Consequently, Hallenbeck & Associates' approach of phased studies is consistent with adopted City regulations. The geologic issues to be resolved by the pending application are chiefly related to land use, density and the grading concept for the project. Construction details are not needed at this time.

Published Mapping

The project site and adjacent region have been mapped by geologists of the U.S. Geological Survey (USGS). The products of the USGS mapping include bedrock geology maps[5,6,7,8] and Quaternary deposits/photointerpretative landslide maps.[9,10,11] Other references of significance include a USGS Professional Paper that provides a detailed analysis of bedrock units in hillside areas of the San Francisco Bay Region[12]; and mapping of Crane,[13] who used oil company subsurface data to refine the interpretation of geologic structure in Contra Costa County. In the aftermath of the January 3-5, 1982 storm, the USGS issued a report which mapped the nearly 18,000 landslides that were triggered by this event within the San Francisco Bay Region, including Contra Costa County.[14,15]

Setting

Regional Geology

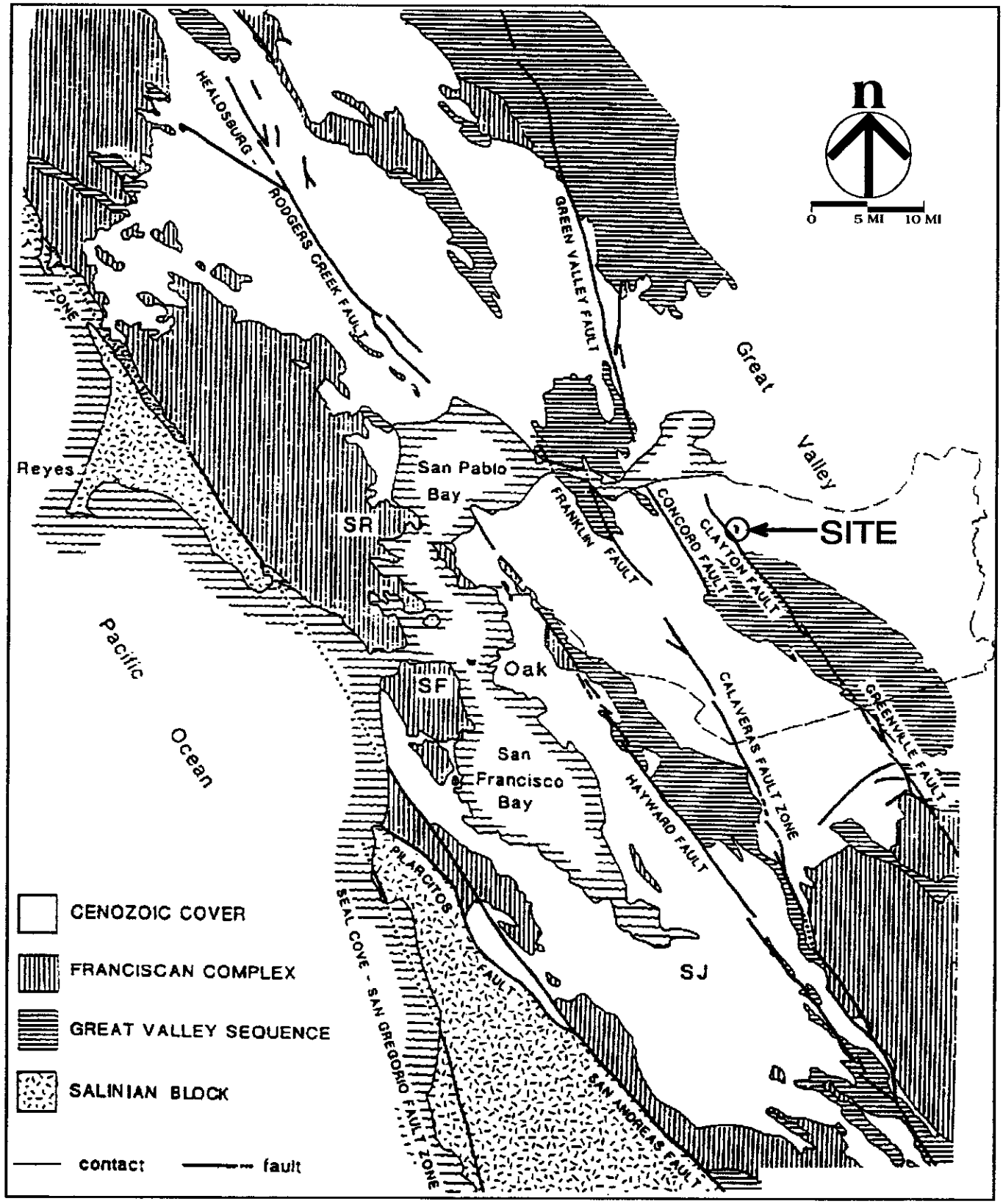
Introduction

The Bailey Estates project area is located in the Los Medanos Hills at the north edge of the Diablo Range. This area is within the seismically active Coast Ranges geomorphic province which stretches nearly 600 miles from the California/Oregon border to Santa Barbara County in Southern California. The complex geologic history is closely tied to the major fault system that runs parallel to the province, and is considered part of the transition zone between the North American and Pacific tectonic plates.

Mount Diablo is the major geologic and topographic feature in the Central County. Its peak, which rises 3,849 feet above sea level, is approximately 7 miles south-southeast of the project site. The core of Mount Diablo is a plug of Franciscan sedimentary rock, along with serpentinite and some volcanic rock. Rocks on the north flank of Mount Diablo are steeply dipping and get successively younger going from the peak toward the Pittsburg-Antioch Plain.

The proposed development is located near the summit of the Los Medanos Hills which is a hilly upland area. The Bailey Estates project area is located within the outcrop belt of marine sedimentary rocks that have been uplifted, tightly folded and faulted. The landslides which commonly mantle the bedrock slopes in this portion of the California Coast Ranges are a reflection of the geologically recent (and continuing) uplift of bedrock and the locally adverse engineering properties of the soil and rock.

Figure 4.2-1 is a regional geologic map of the San Francisco Bay and adjoining areas. It shows major fault zones and divides bedrock units into four broad categories. No active faults are known to cross the site, but the Concord fault passes approximately 4 miles southwest of the site. It was



Source: Darwin Myers Associatees

Figure 4.2-1 Regional Geologic Map

the source of a magnitude 5.4 earthquake on October 23, 1955, which resulted in $1 million in damage. Its trace is characterized by active tectonic creep features. Consequently, the Concord fault is classified as an active fault by the California Division of Mines and Geology (CDMG).[16]

This fault, along with the Hayward-Rodgers Creek and Calaveras faults, are subsidiary branches of the San Andreas fault system that forms the boundary between the North American and Pacific Plates and is the principal source of earthquakes in California.

The nearest fault of regional significance is the Clayton fault, which is an east-dipping thrust fault that approximately coincides with the southwest flank of the Los Medanos Hills. As shown in Figure 4.2-1, this fault passes approximately one-third of a mile southwest of the site. Geologists generally consider the Clayton fault to be the northern extension of the Greenville-Marsh Creek fault zone. This fault system experienced surface fault rupture (cracking/minor displacement) during a January 1980 earthquake. The segment of this fault in the vicinity of the Alameda-Contra Costa County line is considered to be an active fault and is included in an Alquist-Priolo earthquake fault zone. However, the Clayton fault is considered inactive by both the USGS[17] and CDMG.[18]

Seismicity

Earthquake epicenter maps of the San Francisco Bay Region show a strong correlation with mapped active faults. High magnitude earthquakes (greater than Richter Magnitude 6) are generally associated with surface fault rupture in California. Small magnitude seismic events are indicators of adjustments taking place at-depth, but they are generally not accompanied by fault offset at the earth's surface.

Notable, high-magnitude earthquakes occurred on the San Andreas fault in 1838 and 1906. The Richter magnitude of these events has been estimated to be 7.0 and 8.3, respectively. The 1989 Loma Prieta earthquake on the San Andreas fault, which had a magnitude of 7.0, produced co-seismic[19] deformation near the crest of the Santa Cruz Mountains, but was not accompanied by surface fault rupture.

The Hayward fault was the source of earthquakes estimated to have Richter magnitudes of 7.0 (magnitude 7) in 1836 and 1868. The closest large magnitude historic earthquake to the project area was the July 4, 1981 earthquake on the Calaveras fault. This event, which is believed to have caused surface fault rupture in the hills just west of the San Ramon Valley, produced ground shaking of Modified Mercalli Intensity VII[20] in the Central Contra Costa area. The 1868 earthquake on the Hayward fault yielded Modified Mercalli intensities of VIII in the Central Contra Costa County area.[21]

Note that no active seismic zones and relatively few earthquake epicenters are plotted in the Los Medanos Hills. Nevertheless, because of the location of the site within a region of active faults, there is potential for strong earthquake shaking to trigger damage to man-made structures, or for ground shaking to trigger landslides, liquefaction or other forms of ground failure. The probability of a large earthquake (magnitude 7 or greater) along the San Francisco Peninsula segment of the San Andreas fault zone is about 23 percent over a 30-year period[22]; along the northern East Bay

segment of the Hayward fault zone is about 28 percent for the same period; and 22 percent for the Rodgers Creek fault.[23,24] The probability of a magnitude 6 earthquake along the northern Calaveras is estimated to be approximately 50 percent in the next 30 years, and 10 percent for a magnitude 7 event.[25] The total probability that one or more large earthquakes will occur in the 30-year period in the San Francisco Bay region is estimated to be 90 percent.[26]

In the June 9, 1994 edition of the *Contra Costa Times*, David Schwartz, a seismologist with the USGS, is quoted as indicating that the probability of a major earthquake in the Bay Area by the Year 2020 has been underestimated previously and is probably at 90 percent (or greater). The reevaluation of earthquake risk was brought about by the discovery of new faults and by significant new information on the behavior of faults. (Some faults have been found to be slipping faster than originally suspected.) The *Contra Costa County General Plan*,[27] Table 10-5, page 10–21, provides estimates of the maximum parameters for faults in Contra Costa County, as well as the San Andreas fault. Data relevant to the site is presented in Table 4.2-1.

Table 4.2-1
Estimated Maximum Parameters
For Faults Affecting the Project Site

Fault	Richter Magnitude[1]	Distance (Miles)[2]	Peak Bedrock Acceleration[3]
San Andreas	8.25 - 8.5	36	.20 - .25
Hayward	6.5 - 8.5	17	.15 - .40
Calaveras	6.5 - 7.25	12	.15 - .40
Concord	5.75 - 6.5	4	.25 - .45
Greenville	5.75 - 6.5	14	.15 - .30
CRCV[5]	5.75 - 6.5	15	.15 - .30

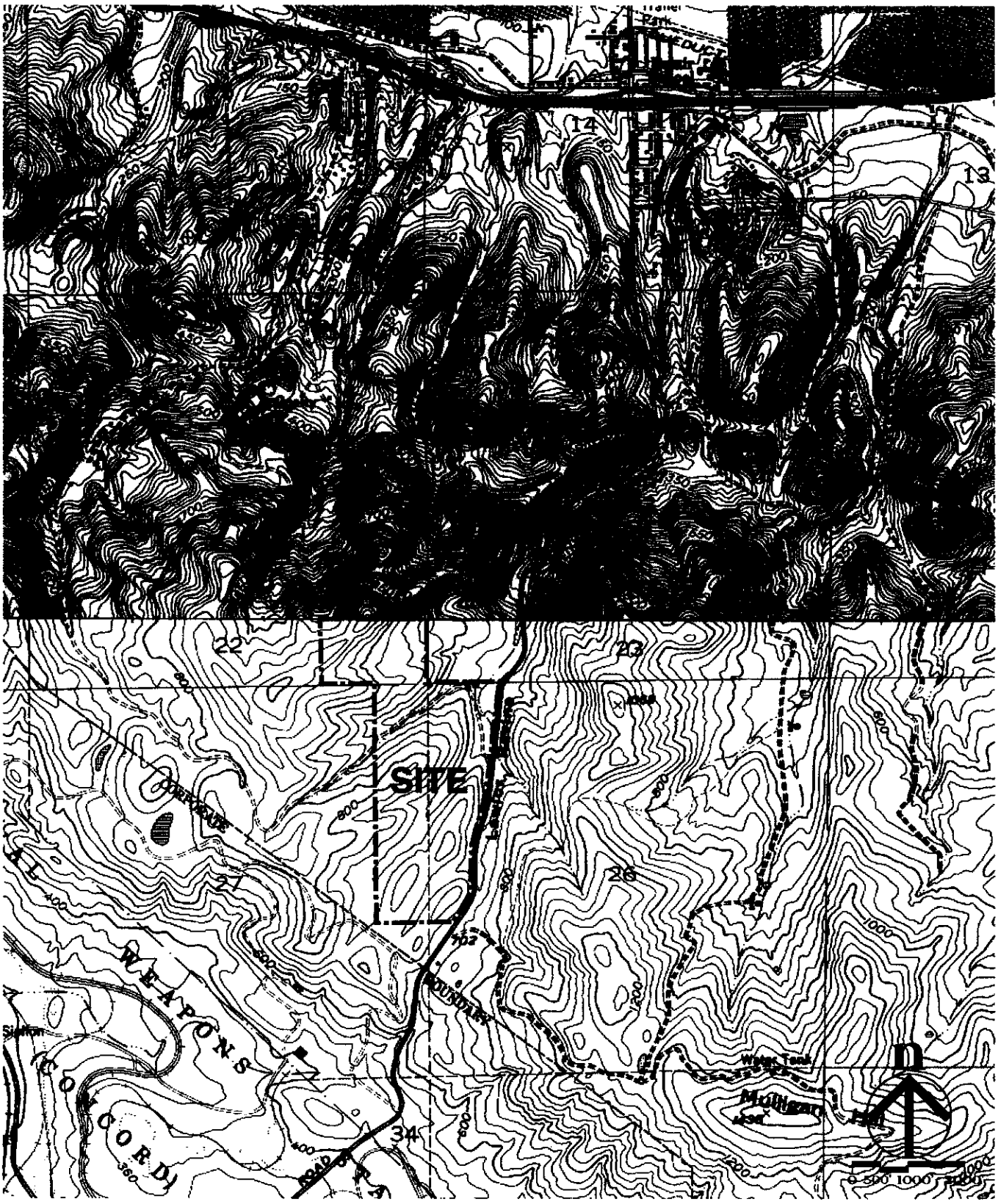
[1] The first listed magnitude is maximum probable earthquake; the second is the maximum credible earthquake.
[2] Distance of project site from fault in miles.
[3] Interpolated from Table 10-5, *Contra Costa County General Plan*.
[4] g = acceleration due to gravity, about 32 feet per second per second.
[5] Coast Range - Central Valley blind fold and thrust belt.

Source: *Contra Costa County General Plan*, 1995-2010.

In summary, all six of the seismic zones listed in Table 4.2-1 are capable of producing strong earthquake shaking at the site. The ground motion characteristics at specific building sites in the project area will be dependent on the characteristics of the seismic source, its magnitude, distance from the site, as well as local geologic and topographic conditions in the project area and other parameters.

Topography and Landforms

Topography at the project area is dominated by resistant northeast-trending ridgelines with rounded northeast-trending secondary ridges separated by steep-sided ravines as shown in Figure 4.2-2. Elevations on site vary from a high of approximately +990 feet in the northwest corner to a low of



Source: Honker Bay and Clayton Quadrangle Maps

Figure 4.2-2 USGS Topography

+510 feet in the northeast corner of the property. The slopes are typically steepest just below the ridgecrest (about 2:1, horizontal to vertical) and tend to flatten gradually toward the base of the hillside.

There are three northeast-trending ravines on the site, each of which are tributaries of Lawlor Ravine, an intermittent stream that conveys runoff to the San Joaquin River, approximately 7.5 miles north of the Bailey Estates. The project site is located on the headwaters portion of this watershed. Swales on the site are V-shaped, but show only localized areas of active down-cutting.

Thirty Percent Slopes

A large percentage of the 122-acre Bailey Estates project area has slopes in excess of 30 percent. According to the topographic map on the site, broad areas of the site possess slopes with gradients of 30 to 55 percent. Figure 4.2-3 shows the location and distribution of slopes equal to or in excess of 30 percent. The data indicates that 60.8 percent of the Bailey Estates site possess slopes in excess of 30 percent.

Pertinent Plans and Policies

The Pittsburg General Plan[28] contains a number of policies that restrict development on slopes steeper than 30 percent. General Plan policies most applicable to Bailey Estates include the following: Policies 10-P-1 through 10-P-3, 10-P-7 through 10-P-12, and 10-P-17. Selected policies relating to slope stability, geologic hazards and seismic hazards are presented below.

HEALTH AND SAFETY ELEMENT

Slopes and Erosion

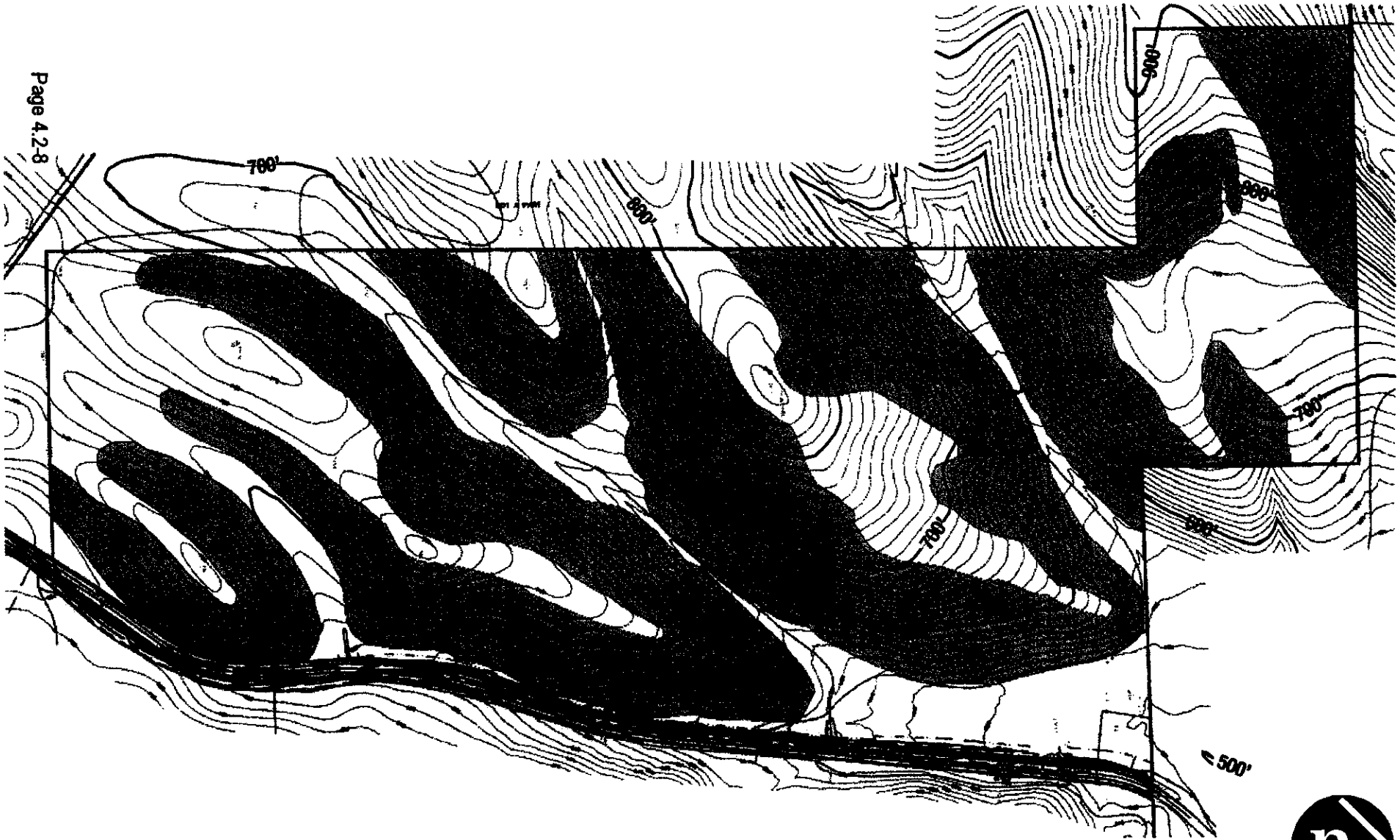
Policies:

10-P-1 Ensure preparation of a soils report by a City-approved engineer/geologist in areas identified as having geological hazards in Figure 10-1 [Geologic Hazards map in the General Plan], as part of development review.

10-P-2 Restrict future development from occurring on slopes greater than 30% (as designated in [General Plan] Figure 10-1) over the 800-foot elevation contour and on major and minor ridgelines (as delineated in [General Plan] Figure 4-2).

10-P-3 Regulate the grading and development of hillside areas for new urban land uses. Ensure that such new uses are constructed to reduce erosion and landsliding hazards:

- Limit cut slopes to 3:1, except where an engineering geologist can establish that a steeper slope would perform satisfactorily over the long term.
- Encourage use of retaining walls or rock-filled crib walls as an alternative to high cut slopes.
- Ensure revegetation of cut-and-fill slopes to control erosion.
- Ensure blending of cut-and-fill slopes within existing contours, and provision of horizontal variation, in order to mitigate the artificial appearance of engineered slopes.



Source: Darwin Myers Associates

Figure 4.2-3 Slope Map

10-P-7 As part of the development approval process, restrict grading to only those areas going into immediate construction as opposed to grading the entire site, unless necessary for slope repair or creek bed restoration. On large tracts of land, avoid having large areas bare and unprotected; units of workable size shall be graded one at a time.

10-P-8 During development review, ensure that new development on unstable slopes (as designated in [General Plan] Figure 10-1) is designed to avoid potential soil creep and debris flow hazards. Avoid concentrating runoff within swales and gullies, particularly where cut-and-fill has occurred.

Geologic Hazards

Policies:

10-P-9 Ensure geotechnical studies prior to development approval in geologic hazard areas, as shown in [General Plan] Figure 10-1. Contract comprehensive geologic and engineering studies of critical structures regardless of location.

10-P-10 As part of development approval, ensure that a registered engineering geologist be available at the discretion of the City Engineer to review reports submitted by applicants in the geologic hazard areas identified in [General Plan] Figure 10-1. Project proponents shall pay all costs associated with engineering studies related to geologic hazards.

10-P-11 Form geological hazard abatement districts (GHADs) prior to development approval in unstable hillside areas (as designated in [General Plan] Figure 10-1) to ensure that geotechnical mitigation measures are maintained over the long-term, and that financial risks are equitably shared among owners and not borne by the City.

10-P-12 Evaluate the feasibility of implementing a hazard reduction program for existing residential development in unstable hillside areas (as designated in [General Plan] Figure 10-1). This would include inspection of structures for conformance with the Building Code.

Seismic Hazards

Policy:

10-P-17 Ensure detailed analysis and mitigation of seismic hazard risk for new development in unstable slope or potential liquefaction areas (as designated in [General Plan] Figure 10-1). Limit the location of critical facilities, such as hospitals, schools, and police stations, in such areas.

The above General Plan policies do not provide objective design standards, but do provide policy direction. Policy 10-P-3 calls for use of 3:1 cut slope gradients unless steeper slopes would be stable and could be revegetated to control erosion. This policy also encourages use of retaining walls as an alternative to high graded slopes, and calls for contour rounding. Policy 10-P-2 restricts development on slopes steeper than 30 percent on the officially-designated ridges (as delineated on General Plan Figure 4-2) and on those hillsides exceeding elevation 800 feet (as shown on General Plan Figure 10-1). Although nearly 61 percent of the site possesses slopes of 30 percent, these policies are not operative on the site. Policy 10-P-17 states that slope stability should be a primary consideration in the ability of land to be developed or designated for urban uses. Other policies

imply that in high risk areas, the design of projects should be sensitive to geologic constraints, and that in areas where landslide hazards cannot be adequately mitigated the lands should remain undeveloped.

Geologic Unit

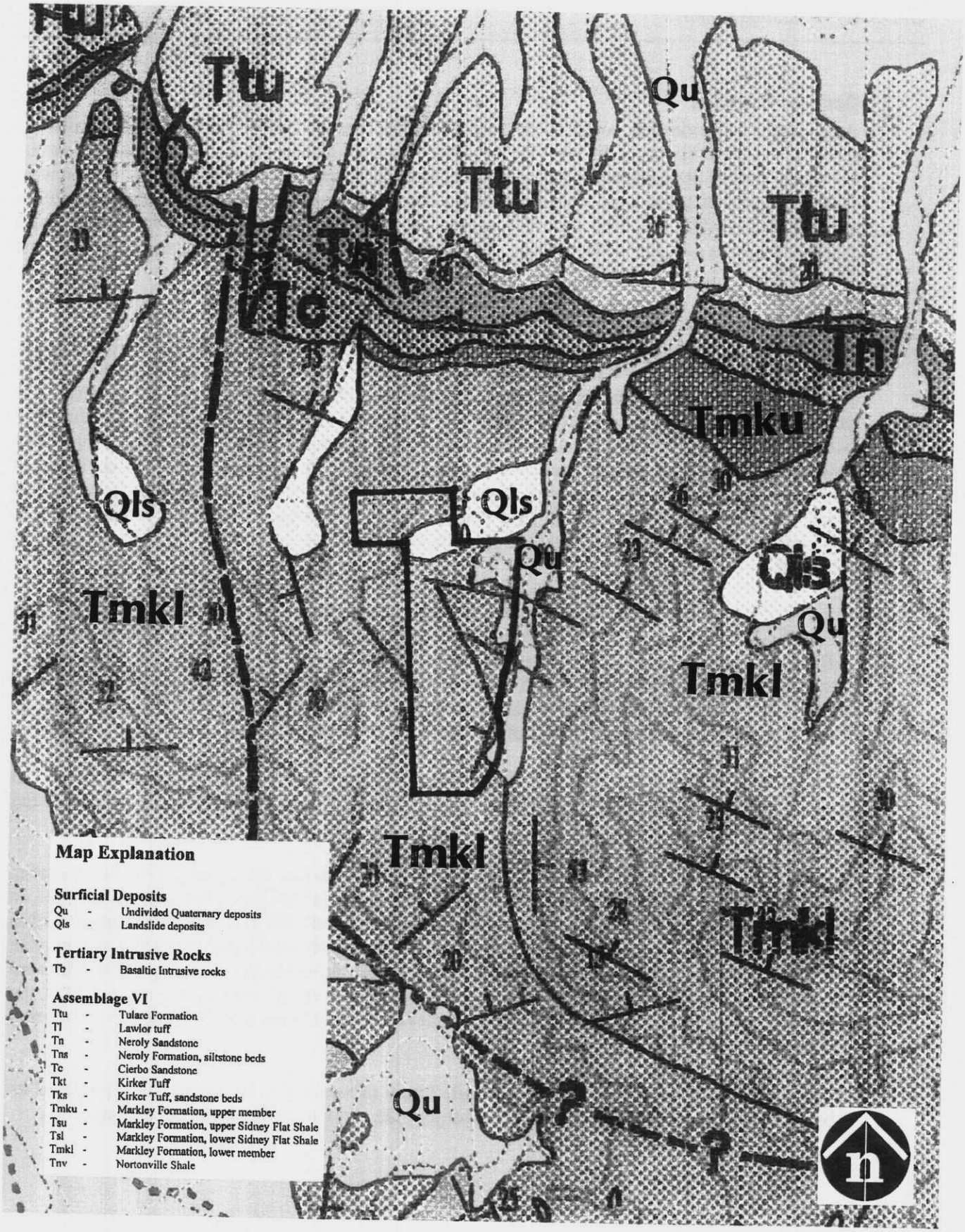
The most recent geologic map of Contra Costa County is a color, digitized geologic map published by the USGS.[29] According to this map, which is presented in Figure 4.2-4, the site is within the outcrop belt of the Markley Formation, Lower Member (Tmkl). This formation is a marine sandstone unit of Eocene age. The explanation of the USGS map describes this unit as "thin-bedded to massive sandstone with minor siltstone and mudstone." Alluvial deposits (Qu) are mapped in the northeast corner of the Bailey Estates project, and a portion of a massive landslide is mapped in the north portion of the property.

In 1995 the USGS issued a Professional Paper that characterizes hillside materials in the San Francisco Bay Region.[30] The maps and unit descriptions are intended to provide a guide to the physical nature of the ground from place-to-place in hillside terrain of the region. The report does not classify geologic units according to their slope stability characteristics. Instead, it provides a unit description, emphasizing physical properties that most influence engineering operations in land development. The publication describes the formation mapped on the property as follows:

1. *Sandstone, arkosic characteristically rich in muscovite, poorly to moderately sorted, silty to varying degrees. Angular to subangular grains vary from fine to coarse; largely medium to coarse grained. Calcite-cemented and limonite concretions as large as 6 feet or more in diameter, many larger than 3 feet.*

2. *Interbeds of shale, mudstone, and siltstone, the shale often interlaminated with sandstone and siltstone. These materials are commonly carbonaceous and micaceous. Literature describes these materials as largely mudstone and siltstone, but our observations are of largely fissile shale and some mudstone. Interbeds include abundant limonite concretions to medium, abundant gypsum, and less abundant limestone nodules as much as several inches in length.*

In summary, the lower member of the Markley Formation is largely sandstone, but within some portions of its outcrop belt this unit contains clayey rock that in places constitutes as much as half of unit. Sections of dominant clayey rock as thick as several hundred feet are mapped by Brabb et al.[31] The sandstone varies from relatively clean to silty, and is weathered to depths greater than 70 feet. Most bedrock is unexpansive, but some is severely expansive (shale). Clayey soils are considered to be highly expansive.



Source: Darwin Myers Associates

Figure 4.2-4 Geologic Map

Geologic Structure

As Figure 4.2-4 indicates, rocks in the vicinity of the site are tightly folded with a northwest-trending anticline bisecting the site. By extrapolation from nearby measurement, bedding on the northeast limb of the fold can be inferred to dip to the northeast at 20 to 30 degrees. On the west limb, the fold dips to the west-southwest but the steepness of the dip is not established. No faults are mapped on the site, but relatively short, inactive faults that are characterized by small displacement are mapped in the vicinity. For example, a bedrock fault is mapped 2,000 feet west of the site.

Landslides

The USGS has prepared photointerpretative landslide maps of the entire San Francisco Bay Region, including the project area.[32] The USGS maps are based on interpretation of 1960s and early 1970s photographs. The landslides are not classified by activity status or type of landslide deposit. The photointerpretative maps were not field checked for accuracy, and they do not show slides that have occurred during the past 20-plus years. Nevertheless, the map fulfills its intended function which is to identify areas that require site-specific geologic studies. The City of Pittsburg has included a reduced-scale version of a Geologic Hazards Map and adopted policies directed to the hazard posed by landslides in the General Plan (Figure 10-1). During routine review of development applications, the planning staff should give consideration to slides where hillside projects are proposed.

In summary, General Plan policies toward landslide hazards deal with development on a project-by-project basis. It has been determined that information on this hazard from published mapping is not sufficiently accurate to serve as a basis for land use decisions. Instead, landslide mapping is used as a "red flag" to identify sites which may be susceptible to sliding. Geologic and geotechnical studies are required to evaluate the hazard, based on site-specific surface and subsurface data. If slope stability problems exist, geotechnical reports should identify means to mitigate this hazard.

The City determined that the Hallenbeck & Associates report (1995) in combination with technical data contained in the Geomatrix (1988) and Engeo (2001, 2003) reports is adequate for processing of the application.

The USGS Landslide Map is presented in Figure 4.2-5. It shows three major northeast-trending ridges, which are separated by narrow bands of colluvium on the floor of ravines. These are, in effect, areas where the thickness of soil is greater than normal. No landslides are mapped within the areas proposed for residential development, but a landslide is indicated in the northern portion of the site (i.e., area where the water tank site is proposed). However, the slide is queried indicating that the precise limits of the slide and even its existence is uncertain. As mapped by the USGS, the upper elevations of this landslide extended to elevations +900 feet, and the slide has an inferred extent of 40 acres.

It should be recognized that the most detailed map of landslides on the site was prepared by ENGEO (see Figure 4.2-6 for a map of the project site showing both landslides and grading).

Soils

Mapped soils consist of clays and are developed on colluvium and weathered bedrock. According to the Soil Survey of Contra Costa County[33] the soils on the site are mapped as the "Altamont-Fontana complex, 30 to 50 percent slopes" (AcF). These are non-prime agricultural soils (Class V), are rated as having a high erosion hazard when vegetation is removed and considered to be highly expansive.

Liquefaction

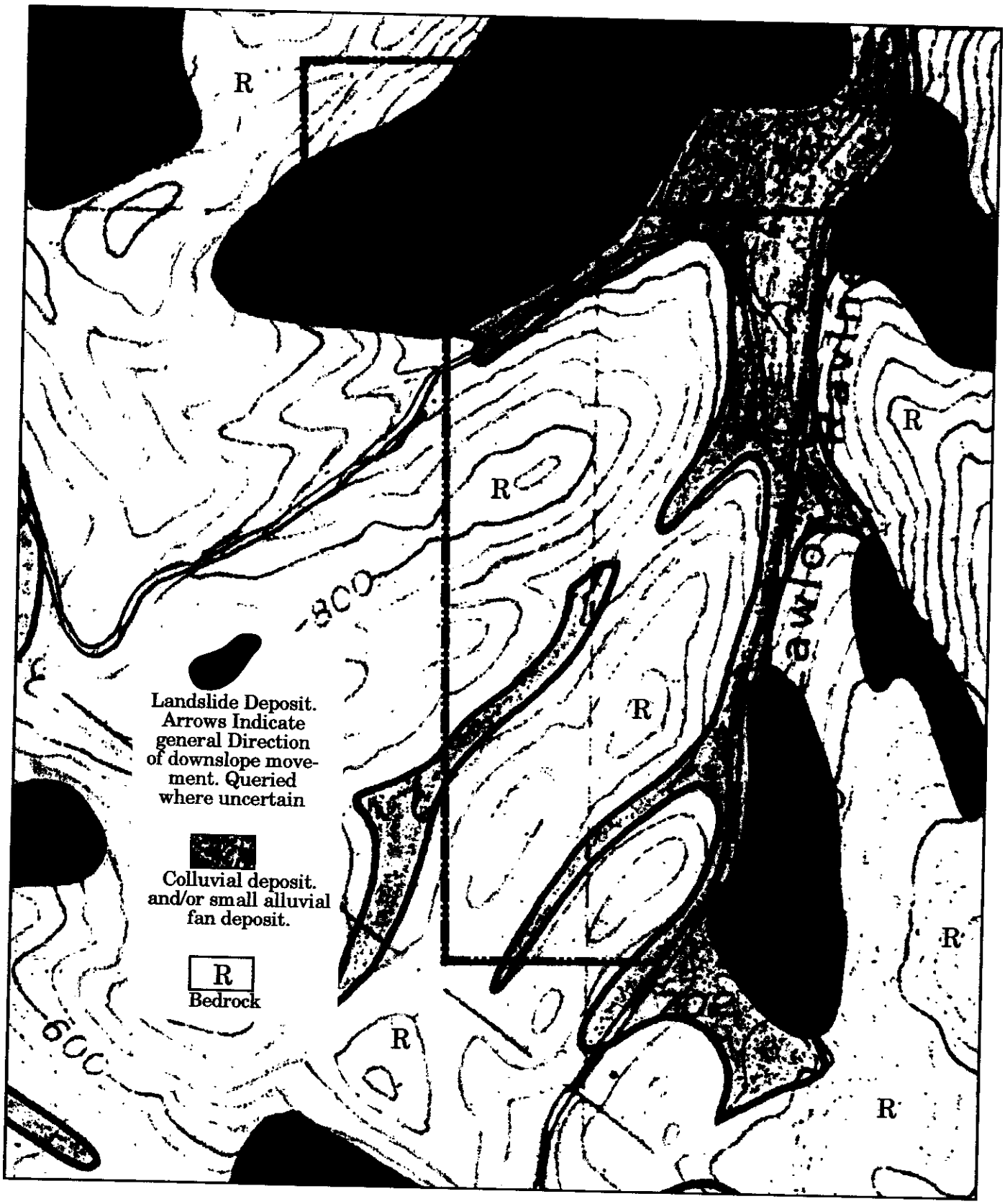
Liquefaction is a specialized form of ground failure caused by earthquake ground motion. It is a condition occurring in water saturated, unconsolidated, relatively clay-free sands and silts triggered by hydraulic pressure. Soil particles are forced apart and into quicksand-like liquid suspension. In the process, normally firm but wet ground materials are transformed into semi-liquid mixtures.

The loss of strength by a liquefied soil can trigger foundation failure of man-made structures, instability of slopes and lateral spreading of level ground. The increase in pore water pressure within the soil results in the upward flow of water. Evidence of liquefaction observed during past earthquakes include the floating of embedded structures, such as tanks; as well as the tilting and settlement of buildings. As the pore water pressure dissipates, the sand densities, causing ground surface and structural settlements. If the soil deposit is dry, and cannot liquefy, vibratory shaking from earthquakes may still produce compaction and accompanying structure settlement.

Historically, ground failure, in its various forms, including liquefaction, has been a problem in areas of continually wet, unconsolidated geologic units. In Contra Costa County, the areas which are most susceptible to seismically-triggered ground failure include the geologically-young sediments of the San Francisco Bay estuary, including the Delta lowlands, as well as recent stream channel and sand dune deposits. Liquefaction cannot occur in deposits of dense sand or clays. Soils prone to liquefaction include loose to medium dense sands and silts occurring below the water table. Liquefaction of coarse gravels is rare because they are highly permeable and dissipate excessive pore water pressures rapidly.

The General Plan includes a liquefaction potential map (Figure 10-1) that is based on mapping of the Association of Bay Area Governments (1980). According to this map, the portions of the property that are underlain by Quaternary deposits are classified as having a "high liquefaction" potential. (The areas mapped as colluvium in Figure 4.2-5 generally correspond to the portions of the site rated "high liquefaction" potential by the City.) General Plan Policy 10-P-17 requires detailed analysis and mitigation of liquefaction potential.

In summary, the City recognizes the problem posed by liquefaction, and General Plan policies toward liquefaction deal with development on a project-by-project basis. It has been determined that published information on liquefaction potential is not sufficient to designate areas of "generally high" liquefaction potential for open space land uses. The reason is that information on the occurrence of liquefiable soils varies in quality from place to place. Many lands classified as "generally high" potentially lack silty sands, or the sands are too well consolidated or too clayey to liquefy, or they are above the water table. Instead, the liquefaction potential map is used as a "red flag" to identify sites which may be susceptible to liquefaction. Geotechnical studies are required to evaluate the hazard, based on site-specific borehole and laboratory data. If liquefiable sands are present, the geotechnical report should identify means to mitigate this hazard.



Source: USGS Open File Map #75-277-12

Figure 4.2-5Landslide Map

During the review of land development applications, the planning staff examines the liquefaction potential map. For properties in the area rated "high," detailed studies are required to make a site-specific evaluation of the hazard. Experience in Contra Costa County indicates that only one acre out of every 100 acres in the "high liquefaction" potential category possesses the unique set of properties needed for liquefaction.

Soil Contamination

The project site is not on the State of California's Cortese list, and it is not on a list of sites with soil contamination maintained by the Contra Costa County Health Services Department, Hazardous Materials Division. In response to the Notice of Intent to Prepare an Environmental Impact Report, the State Office of Toxic Substance Control raised a question about the historic grazing use of the property. Specifically, the letter questioned whether "dipping" of livestock occurred (i.e., emersion of calves in chemicals intended to control disease). In response to this concern the family that grazed cattle on the property for the last 50 years was contacted. They indicated that no "dipping" ever occurred on the site.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with geologic or soil hazards. CEQA Guidelines (2003) define a significant impact on the geologic or soil environment as one that would:

- Expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving:
  - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Map;
  - strong seismic ground shaking;
  - seismic-related ground failure, including liquefaction;
  - landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Conflicts of a development concept with adopted General Plan policies are also significant impacts.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

General Plan Compliance

IMPACT 4.2-1: Portions of the Tentative Subdivision Map may be inconsistent with General Plan policies calling for: a) use of 3:1 cut slope gradients; and b) use of retaining walls to avoid high engineered slopes.

Table 4.2-2 provides an assessment of the compliance of the project with the Health and Safety Element policies presented on pages 4.2-6 and 4.2-9.

All of the following mitigation measures are required to reduce the impact of General Plan inconsistency to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.2-1A: Use of 3:1 slope gradients shall be the standard for graded slopes throughout the project. Where 3:1 slope gradients are not feasible, use 3:1 slopes in combination with permanent (i.e., non-wood) retaining walls; and/or use of reinforcement earth in fill slopes (e.g., geogrid). Select (granular) fill material or dense sandstone bedrock can be a basis for increasing the gradient for the southern entrance to the project to 2.5:1, provided that slope stability calculations support the use of a 2.5:1 slope at this one location. The construction of 3:1 slopes on the off-site slopes to the south and west of the property may not be feasible if grading easements cannot be secured for engineered slopes with these gradients. In that instance, slope stability analysis and aggressive erosion control measures shall be required to document that the outlook for long-term stability is good, and to control erosion on these off-site slopes.

4.2-1B: Within the residential project, use of 2:1 slope gradients shall be limited to side yard or rear yard slopes between residential lots up to 6 feet high (maximum). Any higher 2:1 slopes shall require special engineering (e.g., retaining walls, select fill, reinforced earth—or their use supported by slope stability analysis).

4.2-1C: Drainage terraces shall not be required on 2.5 :1 (or flatter) slopes, but steel reinforced concrete-lined J-ditches may be required at toe of slope, top of slope, or behind retaining walls to control runoff.

4.2-1D: All major slopes shall be contour-rounded and provide a smooth transition to natural topography.

Table 4.2-2
Evaluation of Project Compliance
with Health and Safety Element Policies*

Policy	Discussion	Timing of Compliance	Status
10-P-1	Submittal of design-level geotechnical report.	Prior to issuance of building permit.	Not operative at present.
10-P-2	No major or minor ridgelines are proposed for grading. Earthwork on knoll above 800 feet is in area where the gradient of natural slopes is less than 30 percent.	Not applicable to Bailey Estates.	Not applicable to Bailey Estates.
10-P-3	Areas of the project propose 2:1 slopes that require redesign, including Street N; rear of Lots 7–10, 112–120 and 201–206; between Lots 143 and 153; and off-tract grading west and south of project.	Prior to recordation of Vesting Tentative Map.	Implementation of Mitigation Measures 4.2-1A through 4.2-1C will bring project into compliance.
10-P-7	Policy applies to large tracts of land. The project concentrates development on 73.8 acres, which is logically graded as a single project.	Not applicable to Bailey Estates.	Not applicable to Bailey Estates.
10-P-8	Project design follows the intent of this policy.	—	Project in compliance.
10-P-9	Geotechnical studies have established the feasibility of the project.	A design-level geotechnical report shall be required prior to construction.	Not operative at present.
10-P-10	Requires inspections by the project engineering geologist during grading.	Ongoing during grading.	Not operative at present.
10-P-11	Recommends establishment of a geological hazard abatement district (GHAD) in hillside areas.	During project approval process.	Typically, GHADs are required as a condition of approval; not CEQA issue.
10-P-12	This policy applies to established residential neighborhoods	Not applicable.	Not applicable.
10-P-17	This policy calls for detailed analysis and mitigation of seismic hazards.	After project approval, a design-level geotechnical report will be required by the City.	Compliance required prior to construction.

* Policies are listed on pages 4.2-6 and 4.2-9.

4.2-1E: The topsoil shall be salvaged during clearing of the areas to be graded throughout the project. The topsoil shall be used as a dressing on engineered slopes in open space areas of the project (including the off-site engineered slopes) possessing gradients of 3:1 or flatter.

Conceptual Grading Plan

IMPACT 4.2-2: Development of the proposed project will require mass grading of hillsides to create stable areas suitable for development. Such grading may result in erosion, unnatural finished slopes, and potential structural and drainage problems.

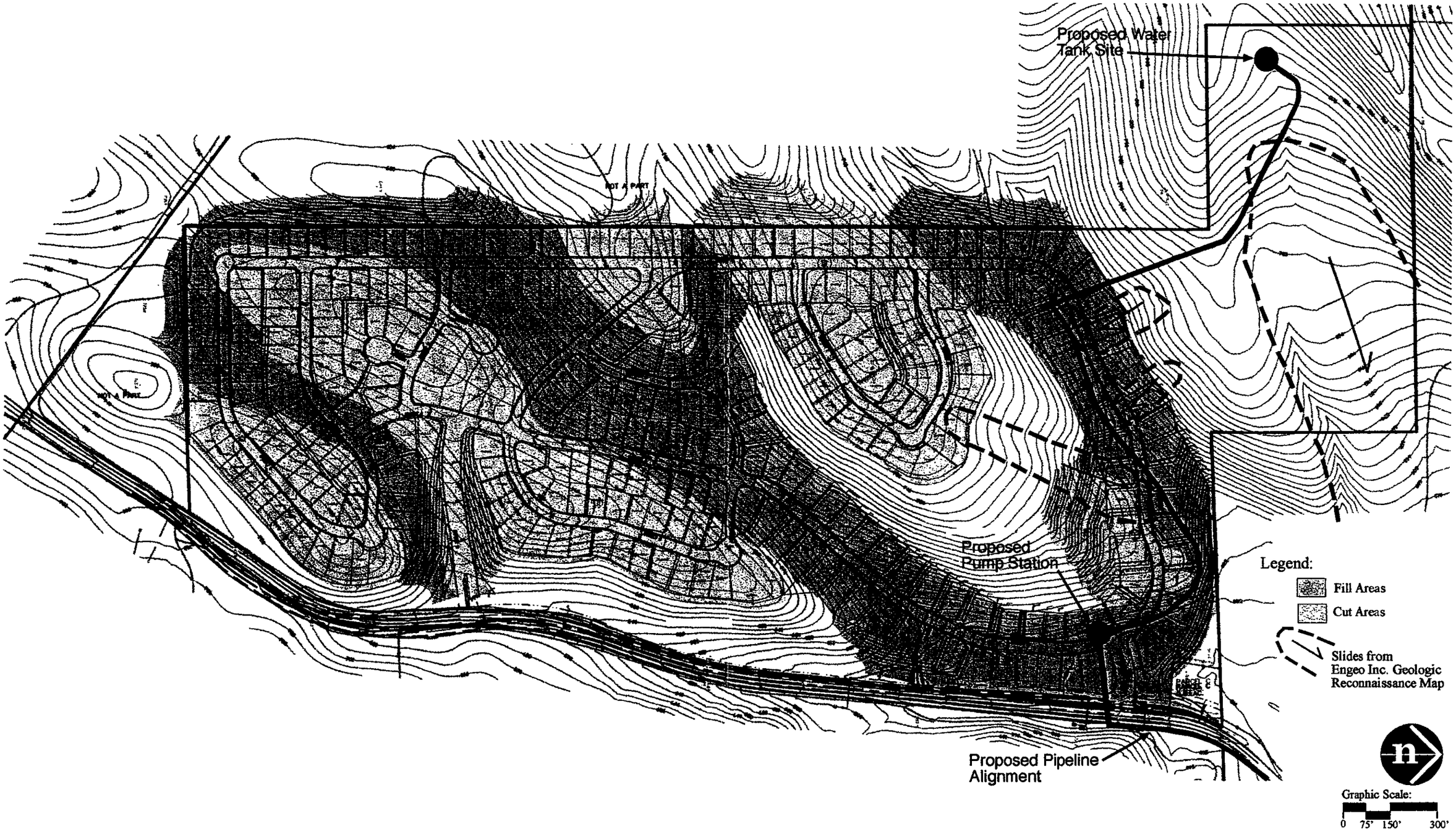
The project application provides a plan that concentrates grading and development on approximately 60 percent of the parcel (73.8 acres), with approximately 40 percent (48.2 acres) retained as "open space." The grading plan strives to create safe, useable development areas. Within the lands designated for development, mass grading is proposed. Open space lands adjacent to developed areas will be largely retained as ungraded (natural) hillside areas. Where they are to be graded, open space lands are proposed to have slope gradients of 2:1 (horizontal to vertical). In general, the grading concept is for lowering the crestal elevation of ridges and placing fills in ravines.

The preliminary grading plan for the project is designed to accomplish an earthwork balance, with 2 million cubic yards of cut and 1.922 million cubic yards of fill. The current earthwork analysis is based on plans with a scale of 1 inch = 100 feet and a 10-foot contour interval. It is reasonable to anticipate that as the project evolves and more detailed engineering studies are performed, more precise information will be available on grading volumes, and adjustments will be made to achieve a balance within the proposed development.

Figure 4.2-6, Cut & Fill Map, indicates the graded areas of the site. As proposed, the project would be graded as one grading project (i.e., the earthwork will not be phased). This volume of earthwork can be expected to require one full grading season. Note that the major cut slope within the project is a 100-foot-high north-facing slope that overlooks proposed project Lots 201–206. Additionally, 35-foot-high and 65-foot-high cut slopes are proposed on the open space parcel just west of the proposed subdivision. The major fill slopes on the site are on the flanks of the southern entrance road to the project (45 feet high); fill in a drainage swale east of proposed project Lots 152–154 (40 feet high); and along the north boundary of the project, at the rear of proposed project Lots 112–120 (35 feet high). The maximum proposed depth of cut is approximately 80 feet; and the maximum thickness of fill is approximately 70 feet.

Because the grading plan was developed using a 10-foot contour interval, these estimates of the thickness of fill and depth of cut should only be considered approximate. The details of the grading may be subject to refinement as information on geology evolves, and as development concepts are finalized. Additional points that should be made are:

- Grading is proposed outside the project boundary. As proposed, the grading for this area consists of slopes with gradients of 2:1. The Safety Element (Policy 10-P-3) calls for use of 3:1 gradients for cut slopes. The mitigation measures for the preceding impact call for



Source: Darwin Myers Associates

Figure 4.2-6 Cut & Fill Map

flattening the gradient of all major slopes to 3:1 (or use of special engineering – retaining walls or reinforced earth). Flattening the slope by grading will increase the graded area, but will allow topsoil to be track-walked over the graded area which will assure revegetation and restoration of grassland habitat. With contour rounding and revegetation, the off-site area will "heal" and not be recognizable as a graded area after one year.

- Grading details are not shown for the water reservoir or its maintenance access road. Other infrastructure (e.g., storm water detention basin, domestic water pumping station, sewage pipeline) also require earthwork, but the details were not provided for the project.
- Engeo has mapped three landslides in the north portion of the site. Corrective grading of these slides is not incorporated into the grading plans.
- The Visual Quality section presents photosimulations of grading and development for the project as seen from Bailey Road. The Visual Quality section recommends that development of the northern portion of the site be avoided because of its visual impact. With regard to geologic factors, it appears that stable building sites could be created. There is a question as to whether the amount of hillside grading is excessive on the slope overlooking project Lots 201–206. Also, an 800-foot-long fill slope (up to 40 feet high) along the rear of project Lots 112–120 is proposed to be within private lots. For long-term maintenance of this slope it would be appropriately included in private open space, rather than divided among nine residential lots.

All of the following mitigation measures are required to reduce the impacts of mass grading to a less-than-significant level.

❑ **MITIGATION MEASURES:**

4.2-2A: A design-level geotechnical report shall be prepared for this project by a geotechnical engineer. This geotechnical report shall provide design-level recommendations for grading, drainage and foundations, including standards for cut/fill transition lots, sandstone/shale-transition lots, and differential fill thickness lots. Grading, foundation and improvement plans shall comply with recommendations in the approved geotechnical report.

4.2-2B: Final design of the proposed improvements shall be made in conjunction with a design-level geotechnical investigation, submitted to the City of Pittsburg for review prior to issuing any permits. This investigation shall incorporate stability analysis of both existing and reconstructed project area slopes.

4.2-2C: All roads, structural foundations and underground utilities shall be designed to accommodate estimated settlements without failure, especially across transitions between fills and cuts.

4.2-2D: The more expansive soils and bedrock shall be placed at the bottom of deep fills.

4.2-2E: All fills shall be adequately keyed into firm, natural terrain unaffected by shrinkage cracks.

4.2-2F: Subsurface drainage systems shall be installed in all keyways, and in swales which are filled.

4.2-2G: Buttress fills shall be constructed at the toes of all major cut slopes and slide areas which abut development areas.

4.2-2H: Grading within open space lands shall be contour-rounded to mimic natural terrain features, mantled with topsoil and revegetated.

4.2-2I: Project area slopes shall have a factor of safety greater than 1.15 under pseudostatic conditions (i.e., assuming maximum possible groundwater levels during the life of the project and earthquake shaking).

4.2-2J: In compliance with Health and Safety Element Policy 10-P-11, a geologic hazard abatement district shall be established for this project, or it shall be annexed into an existing GHAD. If maintenance of the storm water detention basin is not assigned to the GHAD, the entity recommended for maintenance of the basin must be acceptable to the City. This necessarily implies 1) a perpetual source of funding, 2) maintenance plan/maintenance schedule, and 3) documentation that maintenance activities do not conflict with requirements of permit-granting agencies.

4.2-2K: A geotechnical engineer and an engineering geologist shall monitor all earthwork. The monitoring shall include preparation of an "as-built" geologic map that shows the location of keyways and location and depth of subdrains and location of cleanouts, based on field survey.

Geologic Hazards

IMPACT 4.2-3: Landslides and liquefiable soils have the potential to cause significant damage to improvements.

Landslides (primarily earthflows) were mapped in the project area by previous published and unpublished site-specific studies.[34,35,36] (The most recent and detailed mapping of slides on site is presented in Figure 4.2-6.) Published mapping of the U.S. Geological Survey indicates landslides are extensive in the project vicinity, and the *City of Pittsburg General Plan* indicates potential landslides and liquefaction hazards. Previous mapping of the site indicates only four small landslides on the property, along with a deep-seated slump flow complex approximately 200 feet east of the water reservoir site. Slump flow complexes are rotational and may extend into bedrock. Liquefiable sands, if they exist, are restricted to the northeast corner of the site.

The preliminary data provided by Hallenbeck & Associates, Inc.[37] and Geomatrix[38] indicate that the portion of the site proposed for residential use does not present significant landslide hazards. Nevertheless, the design-level geotechnical report should analyze slope instability with respect to planned improvements. These risks can be significantly reduced, or, in many cases, prevented by recognition of the existing and planned conditions.

All of the following mitigation measures are required to reduce the impact of potential landsliding to a less-than-significant level.

❑ **MITIGATION MEASURES:**

4.2-3A: The developer shall remediate landslides which present a potential hazard. The design-level geotechnical report shall analyze slope instability with respect to planned improvements, including:

- Specific remediation measures to remove/stabilize landslides and areas of creeping soils within or affecting proposed lots. Where corrective grading is not economically feasible or environmentally acceptable, planned improvements shall be set back from those areas.
- Impact deflection or catchment structures below unmitigated landslide or swale areas; and appropriate foundation design.

4.2-3B: Although the preliminary data provided by previous geotechnical investigations[39,40] indicate the liquefaction potential of Quaternary deposits on the site to be low, the design-level geotechnical report shall further evaluate liquefaction potential based on adequate subsurface data and supporting engineering analysis if relatively clay-free sands are present. No development shall be allowed in areas of liquefiable soils without full remediation.

4.2-3C: Grading, foundation and improvement plans shall comply with recommendations in the approved geotechnical report.

IMPACT 4.2-4: Potential vertical and lateral movement of fills could cause significant damage to improvements.

Fills up to approximately 70 feet thick are proposed for the project. Technical literature indicates that even engineered fills that are properly compacted can experience vertical movement (settlement as the fill experiences consolidation; swelling as the fill gradually becomes saturated). Fills made chiefly with highly expansive soils and bedrock are likely to experience significant post-construction movement. The potential for these problems is much less when moderately and non-expansive fill materials are used.

Lateral deformation of fill generally occurs near faces of high fill slopes which are constructed of expansive materials. Such deformation typically occurs after the fill is subjected to long-term irrigation.

Some fills in the project are proposed in narrow upland valleys. Single-family lots in such areas may have a differential fill thickness of more than 10 feet, or be located at a cut-fill transition. Residences on such lots could experience damage due to differential settlement.

All of the following mitigation measures are required to reduce the impact from vertical and lateral movement of fills to a less-than-significant impact.

❑ **MITIGATION MEASURES:**

4.2-4A: The design-level geotechnical report shall include settlement analysis for each major fill. The report shall also provide a specific analysis for differential vertical movement of building areas where fill thickness varies by more than 10 feet; for cut/fill transition lots; and provide analysis of lateral movement for loss at the edge of proposed fill slopes. It shall also provide specific standards and criteria for selective grading of major fills. Building permits shall not be issued until it is established that the foundation of structures can accommodate the anticipated differential settlement.

4.2-4B: The design-level report shall provide a plan for long-term monitoring of settlements/swelling and lateral movement of fills 50 feet thick (or greater). The engineers for the project shall establish survey monuments in fill areas, especially ravine fills. Monitoring is to commence with the completion of rough grading and continue throughout development of all lots in that phase of the project. The design-level report shall also provide criteria for the timing of residential construction within major fills.

4.2-4C: Fills shall be limited to a maximum thickness of 80 feet because the behavior of deeper fills is less well understood and, hence, less predictable.

Erosion and Sedimentation

IMPACT 4.2-5: The proposed project involves cuts and fills on moderately steep slopes, with a potential to cause significant erosion of unprotected slopes, and downslope sedimentation both on- and off-site.

There are multiple facets of the subject of erosion and sedimentation. Erosion control requires implementation of measures after major earthmoving activities are completed. Sediment control requires working in a situation where the soil is continually being disturbed.

Erosion control requires use of techniques which prevent displacement of soil particles by raindrops, moving water or wind. These techniques include erosion control blankets, mulching and establishing vegetation. Sediment control requires the removal of particles which are suspended in moving water, along with having a knowledge of drainage control. Neither of these potential impacts are easily mitigated, and both require an understanding of the limitations of "Best Management Practices" (BMPs). Erosion and sedimentation are natural geologic processes which do not conflict with protection of resource values. The problem arises when grading activities result in increased sediment yields that exceed historic conditions. Techniques to reduce sediment from runoff waters include the following:

- restrict the amount of land disturbance;
- keep graded slopes as flat as possible;
- restrict grading to the dry summer season;
- implement BMPs to control erosion and minimize the discharge of sediment into creek channels.

There is a mistaken belief that placement of barriers (silt fences, straw bales) is an efficient method to control sediment from exiting the graded area and entering a natural drainage channel. These barriers are ineffective when runoff waters overtop, tunnel under or flow around the barriers, which is an all too often occurrence. As a result, drainage control is important and sediment traps/basins are a vital component of sediment control. To be effective, they should be designed in accordance with the principles of physics (i.e., viscosity, terminal velocity, Stokes Law). All of the following criteria should be used to size sediment traps/basins:

- Design the basin using peak runoff from a 5- or 10-year storm.
- Design the containment system around a specific size soil particle to be removed from moving waters. EPA recommends that particles .02 mm or larger be trapped.
- Provide a long flow path length to ensure the greatest possible opportunity for sedimentation to occur.
- Calculate the anticipated sediment yield from a 10-year storm, and provide sufficient storage capacity in the basin to accommodate this volume of sediment.
- Include a gravel filter in the sediment trap/basin to allow waters to flow through and drain the structure.
- Design the depth of the sediment trap/basin a minimum of at least 2 feet.
- Provide for maintenance of facilities throughout the winter rainy season to ensure effective sediment control measures.

All of the following mitigation measures are required to reduce the impacts of erosion and sedimentation to less-than-significant levels.

❑ **MITIGATION MEASURES:**

Short-Term Erosion Control

4.2-5A: The applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP) to control on-site erosion in accordance with National Pollution Discharge Elimination System (NPDES) regulations and subject to the approval of the City Engineering Department and the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). All of the provisions of this plan shall be implemented throughout the project site and shall include the following:

- Leave existing vegetated areas undisturbed until construction of improvements on each portion of the development site is ready to begin;
- Immediately revegetate or otherwise protect all disturbed areas from both wind and water erosion upon the completion of grading through the use of mulch and/or jute netting blankets;
- Collect storm water runoff into stable drainage channels, from small drainage basins, to prevent the buildup of large, potentially erosive storm water flows;
- Direct runoff away from all areas disturbed by construction;
- Use sediment ponds or siltation basins to trap eroded soils before runoff is discharged into on-site or off-site drainage culverts and channels;
- Schedule major site development work involving excavation and earthmoving for construction during the summer construction season from April 15 through October 1 (any earthwork undertaken after October 1 shall be limited to activities directly related to erosion control); and
- Develop and implement a program for the handling, storage, use and disposal of fuels and hazardous materials. The program shall also include a contingency plan covering accidental hazardous material spills.

Long-Term Sedimentation Control

4.2-5B: Project plans shall incorporate the appropriate design, construction and continued maintenance of one or more of the following long-term sedimentation control measures. The specific measures shall be based on the recommendations of the project geotechnical engineer and hydrologist.

- Construct sediment traps/basins and grassy swales at strategic locations to control sediment.

- Revegetate and maintain graded slopes, either through a homeowners association or a geotechnical hazard abatement district.
- Provide closed downspout collection systems for individual structures and area drains for all residential lots, where such lot drainage programs do not conflict with clean water objectives of the project.
- Design cut-and-fill slopes to minimize, as much as possible, the velocity of sheet flow runoff.

4.2-5C: Concentrated runoff shall not be permitted to drain over cut or fill slopes.

4.2-5D: The location of lined drainage ditches shall be specified on the grading plan accompanying the design-level geotechnical investigation report, which shall be reviewed and approved by the City Engineer.

Expansive Soils and/or Bedrock

IMPACT 4.2-6: Expansive soils and/or bedrock have the potential to cause significant damage to foundations, slabs and pavements.

Expansive soils (those with a high shrink-swell potential) are described and mapped in the project area by the Soil Survey of Contra Costa County.[41] Damage from expansive soils and/or bedrock is one of the most widespread and costly problems in the San Francisco Bay Region. The significant effect of expansive soils and/or bedrock can be mitigated by recognition of the condition and appropriate design. Mitigation measures involving the use of adjustable foundation systems are not generally effective against the effects of regional wet/drought cycles, and are considered undesirable because the systems require periodic maintenance. Subsurface drainage alone is also not generally effective against the effects of regional wet/drought cycles. Highly expansive soils have severe limitations for use in engineered fill.

❑ **MITIGATION MEASURE 4.2-6:** Approvals for design of road sections and building permits shall be based on adequate test borings and laboratory testing of expansion potential of soils and clayey bedrock. The design-level geotechnical investigation shall provide criteria for foundation of pavement design developed in accordance with the Uniform Building Code (UBC) and Pittsburg Municipal Code requirements on the basis of subsurface exploration and laboratory testing. For residences located on level building pads at least 10 feet from the top of any slope, mat foundation systems can be used to support one- or two-story wood-frame dwellings. The foundations shall be sufficiently stiff to move as rigid units with minimum differential movements. The constraints on the use of expansive soil near finish grade shall be evaluated in the design-level geotechnical investigation report.

Grading for Infrastructure

IMPACT 4.2-7: The proposed project would result in significant grading in unstable/marginally stable areas for domestic water reservoirs, pipelines, and a variety of urban services needed to serve the community.

Water distribution, pumping, storage and collection facilities are planned for locations on or near unstable lands that may be subject to landslides, shrink-swell and other geologic hazards. Most of these facilities, such as water mains and sewer mains, will be within the residential development (i.e., planned for areas that would be mass graded and stabilized for development). However, a water storage reservoir and water mains are planned for locations on undeveloped open space lands that may be subject to slope instability and related geologic constraints. Unstable earth conditions could cause damage to potable water or wastewater infrastructure, disrupt services and cause a potential threat to the safety of people. For the project, only the location of the water reservoir was known in detail.

In 2001, Engeo, Inc., issued a report that provided an evaluation of the proposed water tank site.[42] The purpose of the study was to gather information regarding subsurface conditions at the proposed water tank site and to prepare geotechnical recommendations for foundations and related site improvements. The study also included a geologic reconnaissance of the proposed pipeline alignment along Bailey Road. It did not include evaluation of the pump station site or the storm water detention basin, since the location of these facilities were not determined at the time of the investigation.

The scope of work included: 1) literature review; 2) geologic interpretation of aerial photographs; 3) excavation and logging of ten test pits at the water tank site and access road alignment (where bulk samples of representative soil and bedrock materials were collected for laboratory testing); 4) excavation and logging of three exploratory trenches near the possible head scrap mapped by Nilsen (1975) to the east of the proposed water tank site; 5) laboratory testing to evaluate the geotechnical characteristics of soil and bedrock materials at the site, including plasticity and strength testing as deemed appropriate; and 6) engineering analysis of the field and laboratory data.

The primary conclusion of the Engeo report is that the water tank site is feasible. The report goes on to provide specific standards and criteria for its grading, drainage and foundation design. Engeo recommends geotechnical study of the pumping station and other facilities (detention basin) prior to their construction.

All of the following mitigation measures are required to reduce the infrastructure grading impacts to a less-than-significant level.

MITIGATION MEASURES:

4.2-7A: The project proponents shall design all water and wastewater infrastructure to be located in the open space within the subdivision, based upon a grading plan and engineering geotechnical study prepared as part of the design-level

grading plan studies for the project. These plans shall be prepared prior to recording the final subdivision map for the project. The grading plan shall be reviewed and approved by the City Engineer.

4.2-7B: The water reservoir shall be constructed on competent bedrock. Construction of reservoirs on deeply weathered or highly sheared rock shall be avoided. Construction of the reservoir astride a cut/fill transition shall also be avoided.

4.2-7C: Geotechnical studies shall include subsurface data for critical segments of on- or off-site mains (e.g., where mains must traverse steep slopes or slide areas).

4.2-7D: The grading completion report that documents monitoring of the earthwork shall include an original geologic infrastructure of the project areas showing the details of observed features and conditions (including mapping of cut slopes and keyways). The original geologic map shall use an as-graded topographic map as a base. It shall also show the location of all subdrains and clean-outs based on a field survey.

Corrosivity of Soil and Rock

IMPACT 4.2-8: The soil and rock may have a pH less than 7. Untreated steel that is buried or in contact with the ground may be vulnerable to damage.

No testing of the corrosivity of the soils on the site has been performed, but this is a potential hazard that has been confirmed on many properties in Contra Costa County.

All of the following mitigation measures are required to reduce the impact of soil and rock corrosivity to less-than-significant levels.

MITIGATION MEASURES:

4.2-8A: Prior to issuance of grading or building permits, the developer shall submit the results of corrosivity testing of soil and bedrock. Any design changes recommended by the project geotechnical engineer as a result of the test shall be incorporated into the final design of improvements.

4.2-8B: Pipelines shall be designed for the soil conditions. All buried ferrous metal fittings, valves and appurtenances (including bolts) used in water mains and other buried structures shall conform to the requirements in the City Standards.

[1] Hallenbeck & Associates, Inc., 1995, *Preliminary Geotechnical Investigation, Proposed Fox Hollow Subdivision, Pittsburg, California*, Project #6770-9211.

[2] Geomatrix Consultants, *Geologic/Hydrologic Characterization of Bay Point Site, Contra Costa County*, 1988.

[3] Engeo, Inc., 2001, *Geotechnical Exploration, Bailey Estates Water Tank, Pittsburg, California.* Project #5206.3.001.01.

[4] Engeo, Inc., 2003, *Consultation Regarding a Proposed Detention Basin Embankment*, Project #5206.1.001.01.

[5] Graymer, R.W., D.L. Jones and E.E. Brabb, 1994. *Preliminary Geologic Map Emphasizing Bedrock Formations in Contra Costa County.* U.S. Geological Survey Open File Report 94-622 (Scale 1:75,000).

[6] Dibblee, T.W., 1980a. *Preliminary Geologic Map of the Clayton Quadrangle, Contra Costa County, California.* U.S. Geological Survey OFR 80-547.

[7] Dibblee, T.W., 1980b, *Preliminary Geologic Map of the Honker Bay Quadrangle, Solano and Contra Costa Counties, California.* U.S. Geological Survey OFR 80-2009.SS.

[8] Brabb, E.E., H.S. Sonneman and J.R. Switzer, 1971. *Preliminary Geologic Map of the Mount Diablo-Byron Area, Contra Costa, Alameda and San Joaquin Counties, California.* U.S. Geological Survey Open-File Report 71-53.

[9] Helley, E.J. and R.W. Graymer, 1977. "Quaternary Geology of Contra Costa County and Surrounding Area: Derived from the Digital Database." U.S. Geological Survey Open-File Report 97-98.

[10] Nilsen, T.H., 1975a. *Preliminary Photointerpretation Map of Landslide and Other Surficial Deposits of the Clayton 7.5' Quadrangle, Contra Costa County, California.* U.S. Geological Survey OFR 75-277-12.

[11] Nilsen, T.H., 1975b. *Preliminary Photointerpretation Map of Landslide and Other Surficial Deposits of the Honker Bay 7.5' Quadrangle, Contra Costa County, California.* U.S. Geological Survey OFR 75-277-20.

[12] Ellen S.D. and C.M. Wentworth, 1995. *Hillside Materials and Slopes of the San Francisco Bay Region, California.* U.S. Geological Survey, Professional Paper 1357.

[13] Crane, Ron, 1988, *Structural Geology of the San Ramon Valley and Environs, in Field Trip Guide to the Geology of the San Ramon Valley and Environs.* Northern California Geological Society.

[14] Ellen S.D. and G.F. Wieczorek, 1988. *Landslides, Floods and Marine Effects of the Storm of January 3-5, 1982 in the San Francisco Bay Region, California.* U.S. Geological Survey Professional Paper 1434.

[15] Wieczorek, G.F., E.L. Harp and R.K. Mark, 1988. *Debris Flow and Other Landslides in San Mateo, Santa Cruz, Contra Costa, Alameda, Napa, Solano, Lake and Yolo Counties, and Factors Influencing Debris Flow Distribution in Landslides, Floods and Marine Effects of the Storm of January 3-5, 1982 in the San*

Francisco Bay Region, California. U.S. Geological Survey, Professional Paper 1434.

[16] California Division of Mines and Geology (CDMG), 1982. *State of California Special Studies Zones, Clayton 7.5' Quadrangle.*

[17] Bailey, E.H., and D.R. Harden, 1975. *Map Showing Mineral Resources of the San Francisco Bay Region – Present Availability and Planning of the Future.* U.S. Geological Survey, Map I-909.

[18] CDMG, 1982.

[19] Contemporaneous with the seismic event, but not directly associated with the fault plane.

[20] VI = Felt by everyone indoors; VII = Frightens everyone; general alarm and everyone runs outdoors; VIII = General fright and alarm approaches panic.

[21] Toppazada, T.R., C.R. Reel and D.L. Parke, 1981. *Preparation of Isoseismal Maps and Summaries of Reported Effects of Pre-1990 California Earthquakes.* California Division of Mines and Geology Open File Report 81-11, page 182.

[22] USGS Working Group, 1990. *Probabilities of Large Earthquakes in the San Francisco Region, California.* Circular 1053.

[23] Op. cit.

[24] Lindh, A.G. and D.H. Oppenheimer, 1992. *Probabilities of Large Earthquakes in the East Bay (abs)*, in Galehouse, J.S., *Program and Abstracts.* Second Conference on Earthquake Hazards in the Eastern San Francisco Bay Area, page 43.

[25] Op. cit.

[26] USGS Working Group.

[27] Contra Costa County, *Contra Costa Country General Plan, 1995-2010,* July 1996.

[28] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001. Title 15 (Building and Construction), Chapter 15.88, Grading, Erosion and Sediment Control.

[29] Graymer, Jones and Brabb, 1994.

[30] Ellen & Wentworth, 1995.

[31] Brabb, Sonneman and Switzer, 1971.

[32] Nilsen, 1975.

[33] USDA, 1977. *Soil Survey of Contra Costa County, California.* U.S. Department of Agriculture, Soil Conservation Service.

[34] Nilsen, 1975.

[35] Hallenbeck & Associates, 1995. *Preliminary Geotechnical Investigation, Proposed Fox Hollow Subdivision, Pittsburg, California.*

[36] Engeo, Inc., 2001.

[37] Hallenbeck & Associates, Inc., 1995.

[38] Geomatrix Consultants, 1988. *Geologic/Hydrogeologic Characterization of Proposed Bay Point Land Fill Site.*

[39] Hallenbeck & Associates, Inc., 1995.

[40] Engeo, Inc., 2001.

[41] USDA Soil Conservation Service, 1977.

[42] Engeo, Inc., 2001.

4.3 DRAINAGE/WATER QUALITY

Setting

Area Drainage

Local Drainage Conditions

The project site is located near the top of the Los Medanos Hills, which are part of the California Coast Range geomorphic province. These foothills of Mount Diablo separate the Pittsburg-Antioch Plain to the north from the Clayton Valley to the south. The peak of the hills lies south of the subject property, so virtually all runoff from the site flows north toward Pittsburg. Valleys in these hills generally trend in a north-south direction, creating a series of roughly parallel sub-watersheds that begin with the confluence of several small valleys near the southerly ridgeline, and then run almost due north to State Route 4 (SR4) and Suisun Bay.

Elevations on the project site vary from a high point of approximately 990 feet NGVD (National Geodetic Vertical Datum, which, in the Bay Area, is equivalent to mean sea level) on the flank of a ridge in the northwest corner of the property to a low of about 510 feet NGVD in the northeast corner adjacent to Bailey Road. The crest elevations of three lower ridges that cross the central and southern portion of the site range in height from 775 feet to about 840 feet NGVD. Almost all of the property is very hilly, with slopes ranging from less than 10 percent on the bottom of some of the narrow valleys, to more than 50 percent on the steeper hillsides. The only relatively level area is within a 100- to 300-foot-wide corridor adjacent to Bailey Road, in the northeast corner, where an uneven ground surface parallels the slope of the road at a 3 to 4 percent grade. This gentle slope continues across the neighboring property to the north, where the surrounding ridges "pull back" from Bailey Road to create an open meadow outside the project boundaries.[1]

The previously mentioned ridges divide the site into a series of small valleys that slope from southwest to northeast toward Bailey Road. The southernmost valley begins at the crest of Bailey Road, covering an area of about 28 acres in the southeast corner of the site and along Bailey Road, plus about 3 acres beyond the site's southerly boundary. North of this is a larger valley that encompasses nearly 54 acres of the project site, plus another 49 acres beyond the westerly boundary. The third valley covers approximately 87 acres, and it includes 24 acres on the project site and 63 acres uphill and to the west of the site. The last (northernmost) valley includes about 19 acres on the project site, 4.5 acres uphill of the site, and approximately 20.5 acres downhill of the site, covering the previously described meadow along Bailey Road. The three more southerly valleys drain to the site's northeast corner, where they converge just before the hills open out into the meadow. The northernmost valley drains through the meadow, reaching Bailey Road a short distance north of the site's northerly boundary.

Surface runoff from the three valleys that converge in the northeast corner of the site collects in a roadside ditch that runs along the west side of Bailey Road, forming the upper reach of Lawlor Creek. Several small valleys located east of Bailey Road also contribute flow to the ditch through a series of cross pipes underneath the roadway. Most of these pipes are relatively small, so the greatest portion of the east side runoff crosses through a 6-foot-diameter culvert located a short distance upstream of the northeast corner of the site. Below this culvert, the ditch begins to widen

into a defined stream channel as it crosses through a small wetland adjacent to Bailey Road and then curves north near the site's northerly boundary, paralleling Bailey Road through the adjoining meadow. Approximately 1,000 feet downstream of the site, Lawlor Creek crosses to the east side of Bailey Road through another 6-foot-diameter culvert, and then gradually expands into the deeply incised Lawlor Creek ravine that conveys runoff north toward SR4.[2]

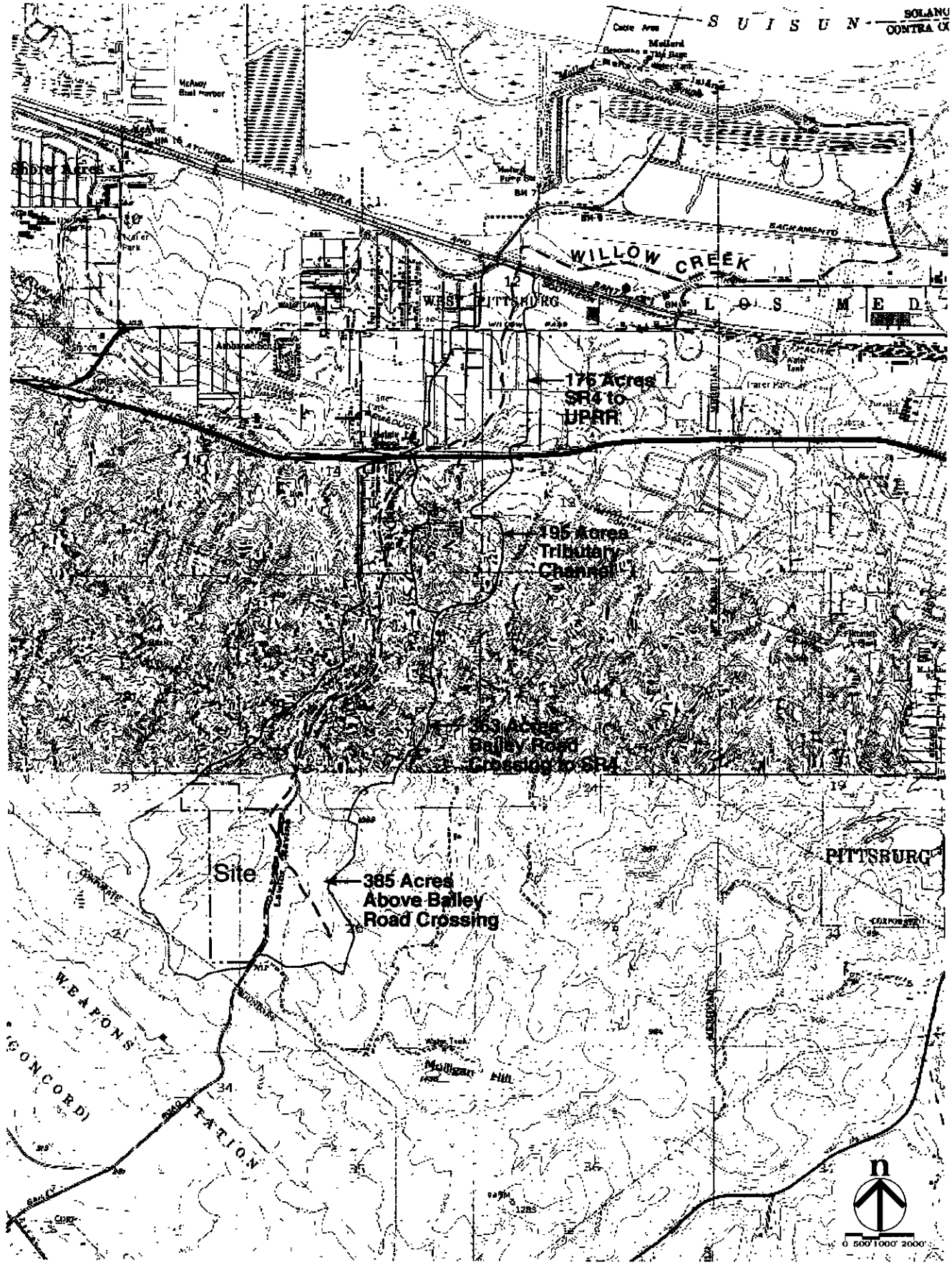
At the downstream Bailey Road crossing, Lawlor Creek drains a total area of approximately 385 acres. This includes 120 acres on the project site (approximately 2 acres at the crest of Bailey Road drain south to Mount Diablo Creek), 145 acres outside the limits of the project on the west side of Bailey Road, and another 120 acres on the east side of Bailey Road.[3] All the land within this watershed, including the project site, is currently undeveloped rangeland.

Downstream Drainage Conditions

As shown in Figure 4.3-1, downstream of the Bailey Road crossing, Lawlor Creek flows through a deep, eroded ravine for almost a mile until it reaches a 6-foot-diameter culvert under West Leland Road. It then continues in an open channel for another 400 feet before entering a 24-inch-diameter culvert that carries it under the entire length of Ambrose Park to a 4.5-foot box culvert under SR4. A little more than 10 percent of the 340 acres that drain to Lawlor Creek between the Bailey Road crossing and SR4 has been developed, all with single-family homes. The remaining area is either undeveloped rangeland, open space or community park. At the freeway, the stream's contributing watershed totals approximately 748 acres (1.17 square miles).

North of SR4, the flow from the box culvert splits into 4-foot and 6-foot-diameter pipes that run east along the south side of Canal Road for a distance of about 1,000 feet, to an open channel that begins in an undeveloped lot located east of Franklin Avenue. Runoff from about 13 acres of the freeway enters Lawlor Creek at the upstream end of the twin pipes, and almost 8 acres of a residential neighborhood located between Canal Road and the East Bay Municipal Utilities District (EBMUD) right-of-way drain directly to the open channel. Just before it crosses underneath the EBMUD Mokulmne Aqueduct, Lawlor Creek is joined by a tributary channel that drains an area of almost 200 acres located south of SR4 and east of the watershed described in the previous paragraph. This area includes approximately 85 acres of open space, 63 acres of single-family homes, 34.5 acres of parks or undeveloped land, and 12.5 acres on the freeway. This tributary channel crosses under the freeway in a 30-inch-diameter culvert that increases to 36 inches at Canal Road. The addition of this area, together with approximately 8 acres on the EBMUD right-of-way and the undeveloped parcel north of Canal Road, raises the total Lawlor Creek watershed upstream of the EBMUD aqueduct to 972 acres (1.48 square miles).

Downstream of the EBMUD aqueduct, Lawlor Creek enters a 7-foot-diameter culvert that carries it for a distance of 950 feet, to within approximately 200 feet of a 5-foot-diameter crossing under Hanlon Way. From Hanlon, the open channel follows rear lot lines for another 1,400 feet through an older subdivision to Willow Pass Road. It then enters an 8-foot by 7-foot box culvert that runs underneath Seasons Drive through the California Seasons subdivision.



Source: Andrew Leahy P.E.

Figure 4.3-1 Onsite/Offsite Drainage Features

It finally discharges to an open channel that crosses the Union Pacific Railroad (UPRR) through a 10-foot by 3-foot trestle, and the Atkison Topeka & Santa Fe Railroad (AT&SFRR) through a pair of 8-foot by 3-foot trestles. North of the AT&SFRR, the stream turns east and runs alongside the railroad for about 1,200 feet before bending to the northeast into the marshlands that adjoin Suisun Bay. Other small streams that drain the hills south of Pittsburg join the channel along this route, and the main stem is renamed Willow Creek before it finally discharges to the bay.

Between EBMUD and Willow Pass Road, Lawlor Creek drains approximately 115 acres of single-family neighborhoods, and it drains an area of almost 32 acres in the subdivision located between Willow Pass and the UPRR. This raises the stream's total drainage area to approximately 1,119 acres, or 1.71 square miles.

Rainfall and Runoff

Contra Costa County's climate generally consists of hot, dry summers followed by cool, wet winters. In the vicinity of the project site, mean annual rainfall averages about 17 inches. At least 90 percent of this total occurs during the November through April rainy season, with the heaviest rainfall occurring in December, January and February.[4] For a design storm having a three-hour duration and a 10-year recurrence interval, peak rainfall intensity is approximately 0.45 inches per hour. The intensity increases to 0.65 inches per hour during a three-hour, 100-year storm.[5] Air temperatures range from below freezing in winter to above 100 degrees in summer.

Storm water runoff is that portion of rainfall that is not absorbed into the ground, taken up by plants, or lost through evaporation. Coarse-grained, permeable soils and heavy vegetative cover reduce runoff, while steep slopes, fine grained soils, and impervious surfaces (buildings and pavement) increase runoff. The duration, frequency, and total amount of rainfall also affect the volume of runoff; frequent and/or heavy rains saturate the soil and reduce infiltration, causing the percentage of rain that runs off the land to increase with the severity of a storm.

Soils on the site primarily consist of a clay and a silty-clay/loam mixture. Runoff is classified as medium to rapid when the soils are bare, but virtually the entire site is well covered with low grass.[6] In addition, the surface is very uneven, which increases the storage of rainfall in small depressions. Based on these characteristics and on the area's hilly topography, it is estimated the project area has a composite runoff coefficient of approximately 0.50. This means that up to 50 percent of rainfall is absorbed directly into the soil or remains standing on the surface for some time after a storm has passed. Rain that does run off sheet flows downslope to the valley bottoms, which then convey it to the Bailey Road ditch and the beginning of Lawlor Creek, in the existing wetland in the northeast corner of the site.

Because the on-site drainage channels are relatively steep, the velocity of storm water runoff is probably high. Nevertheless, there are few signs of active erosion, except for the roadside ditch (where the channel is forced into a straight, erosion-causing alignment) and some portions of the channel at the north end of the site. It appears the existing grass cover is effectively stabilizing most on-site drainageways.

Drainage Maintenance Areas

According to the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD), the Lawlor Creek drainage basin lies within Drainage Area 99, which is an "unformed" drainage area.[7] It is also part of the Zone 10, Willow Creek Watershed, which includes not only the Lawlor Creek basin described above, but also extends east to Railroad Avenue. A number of streams that originate in the hills east of Bailey Road also drain to trestles or culverts under the railroad, and eventually connect to Willow Creek. These streams, as well as the local storm drain systems within downstream, developed areas, do not influence flow conditions in Lawlor Creek or its contributing drainage lines, because they remain hydraulically separated until reaching the broad flood plain that begins at the railroad. High flows that exceed the capacity of the Willow Creek channel simply overflow the banks and spread across the marsh plain, without causing significant back-ups within upstream creek channels and drainage lines.

Within Zone 10, the County Public Works Department only maintains those drainage lines that have been constructed by developers and dedicated to the County, and that also lie within public streets in unincorporated areas. This maintenance is funded by the Unincorporated County Clean Water Assessment. Zone 10 stream channels, including Lawlor Creek, are not located within public easements or rights-of-way, so individual land owners are responsible for whatever maintenance is needed to protect their adjoining properties. In the few areas where Lawlor Creek passes through the City of Pittsburg, the City is responsible for maintenance of culverts and any contributing storm drain systems within the right-of-way of public roads.

Because Drainage Area 99 is an unformed drainage area, there are no plans for either construction of drainage and flood control improvements or for the studies needed to identify improvements that might be required. Neither is there a fee structure in place to fund future studies or drainage improvements. Within developing areas, drainage improvements are typically needed to address existing flooding problems and to provide additional capacity to accommodate higher rates of runoff generated by the creation of new, impervious surfaces within a watershed. Within established drainage areas, the City of Pittsburg requires developers/project applicants to furnish proof that the appropriate drainage fees have been paid to the Flood Control District prior to the approval of final subdivision maps. There is no requirement of this type for projects in the Lawlor Creek watershed.

Design Requirements

Although there are no drainage fees in Drainage Area 99, standard practice is to design drainage improvements to meet construction standards of the Flood Control District for all new drainage facilities. Land use changes associated with new projects are not permitted to increase peak flows in the watershed for the *design storms*. CCCFCWCD typically uses a 10-year recurrence interval storm as the basis of design for drainage areas smaller than one square mile, and a 25-year storm for areas between one and four square miles. As noted above, the total drainage basin in the project vicinity is approximately 380 acres (0.59 square mile), so the 10-year standard would govern for the design of all on-site facilities, with the exception of storm water detention basins. Detention basins must not only prevent any increase in peak discharge rates during a 10-year storm, they must also be able to handle the 100-year storm without use of the emergency spillway.

Flooding

None of the land on the project site or downstream to West Leland Road is located within a 100-year flood zone, as delineated on the Federal Emergency Management Agency's (FEMA) current Flood Insurance Rate Maps. Identified flooding areas begin in Ambrose Park, upstream of the Contra Costa Canal, and continue downstream to Willow Pass Road. The flood zone, which describes the areas in which Lawlor Creek overflows its banks or exceeds the capacity of existing culverts and backs up onto the surface, varies in width from about 60 feet to more than 200 feet. Areas of flooding also spread into the railroad ditches below the California Seasons subdivision, but there are few improvements in this area that would be affected by flooding.

There are no records of catastrophic flooding in the Lawlor Creek watershed, but the CCCFCWCD has received numerous complaints from properties within and in the immediate vicinity of the flood zone. Most of these are from three distinct areas: where Lawlor Creek crosses Hanlon Way, on both sides of the EBMUD right-of-way, and in Ambrose Park. Problems at Hanlon Way appear to be caused by an undersized road culvert and a channel that is clogged by silt, vegetation and debris, while flooding around EBMUD's property most likely occurs because the stream channel through a large parcel upstream of the aqueduct is relatively small and undeveloped. In Ambrose Park, the existing 24-inch culvert that carries Lawlor Creek through the park is too small to handle runoff from the upstream watershed, so a portion of the flow must run overland to reach the box culvert under the Contra Costa Canal. According to the Flood Control District, the park floods frequently, in response to fairly low intensity storms.

Water Quality

Existing Water Quality Conditions

Most of the project site is currently used as undeveloped range land. The only significant existing sources of surface water pollution appear to be minor amounts of sediment from the few incised channels on the site and organic wastes produced by the cattle. These organic wastes either seep into the shallow groundwater table or are washed along with the sediment into Lawlor Creek and, ultimately, Suisun Bay. It is expected the impact on both ground and surface water quality is relatively minor, compared with an equivalent area of typical urban land uses.

Water Quality Regulations

Water quality in California is regulated by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), which controls the discharge of pollutants to water bodies from point and non-point sources. In the Pittsburg area, this program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB). Federal regulations issued in November 1990 expanded the authority of the RWQCB to include permitting of storm water discharges from municipal storm sewer systems, industrial processes, and construction sites that disturb areas larger than five acres. Because the project site covers more than five acres, the project applicant would have to obtain a NPDES construction permit from the SWRCB to develop the project site.

In 1994, the RWQCB issued recommendations for New and Redevelopment Controls for Storm Water Programs to define the local regulatory framework and to provide guidelines for construction permitees. These recommendations include policies that define watershed protection goals; set forth minimum non-point source pollutant control requirements for site planning, construction and post-construction activities; and establish criteria for ongoing reporting of water quality control activities. Watershed protection goals are based on policies identified in the San Francisco Bay Basin Water Quality Control Plan (Basin Plan), and the entire program relies on the implementation of "best management practices" to limit pollutant contact with storm water runoff at its source and to remove pollutants before they are discharged into receiving waters. The California Storm Water Quality Task Force[8] has published a series of best management practices handbooks that can be used to identify the most effective ways to achieve the water quality objectives identified by the Basin Plan for the beneficial uses of surface waters, groundwaters, wetlands and marshes.

The Basin Plan's water quality objectives specify that the presence or concentration of listed, potentially deleterious constituents of surface water runoff should not cause a nuisance or adversely affect beneficial uses. A partial list of these constituents includes floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, pH, dissolved oxygen, bacteria, and toxic substances that are lethal to or that produce other detrimental responses in aquatic organisms.[9]

Groundwater

The City of Pittsburg is chiefly located within the Pittsburg-Antioch Plain groundwater basin, which is part of the larger Sacramento/San Joaquin groundwater regime. The basin is mainly replenished by rainwater that seeps into the ground through granular soils and pervious bedrock deposits within stream channels in the hills south of SR4. This water flows to the north, with the water table elevation gradually "falling" with the land surface until it reaches the below-sea-level aquifer.

Groundwater quality in the Pittsburg Plain basin is generally poor, due to salt water intrusion from Suisun Bay and the San Joaquin River and, to a limited extent, to the historical discharge of contaminants by the many industrial uses located along the shoreline. As a result, roughly 10 to 15 percent of the City's water supply comes from groundwater wells. The City obtains the remaining 85 to 90 percent of its drinking water from the Contra Costa Water District.

Investigations performed for other development projects within the hills south of SR4 observed that groundwater is generally found in two separate regimes. Shallow groundwater occurs as a seasonal saturation of the upper five to ten feet of surface soil and underlying bedrock. This groundwater is generally saline with high mineral concentrations, and most of it slowly drains into streams and natural drainage channels at the end of the rainy season. Shallow groundwater that seeps through the upper layers of bedrock is found year-round between 40 and 80 feet below the surface, depending on local topography and fluctuations in annual rainfall. Because it is filtered through bedrock, the quality of this deeper water is significantly better than at higher levels, and well records indicate that it can produce yields of between 10 and 60 gallons per minute.[10]

Stream Preservation

Existing stream channels in California are protected by Sections 1600-1603 of the Fish and Game Code. These regulations specify that it is a landowner's responsibility to obtain a state permit before undertaking any modifications within an existing stream channel, up to the top of bank. Stream channels are defined by the Department of Fish and Game (CDFG) as exhibiting evidence of scour, having a definable bank, or having or being capable of supporting riparian vegetation. In addition to state regulations, pages 9-14 and 9-15 of the Pittsburg General Plan[11] refer to creeks as "valuable physical, aesthetic, recreational and ecological assets," and it seeks to "[p]reserve and enhance Pittsburg's creeks for their value in providing visual amenity, drainage capacity and habitat value." Furthermore, the *Contra Costa County General Plan* stipulates that "natural waterways... identified as important and irreplaceable natural resources" should be preserved and restored.

Although none of the existing drainage channels on the project site appear very stream-like, several channel sections support seasonal riparian or wetland vegetation and provide habitat that could potentially support threatened or endangered animal species. Refer to Section 4.8: Biological Resources for discussion of the impacts and recommended mitigation measures associated with stream preservation.

Pertinent Plans and Policies

The Pittsburg General Plan[12] contains a number of policies relevant to the proposed project that pertain to storm water runoff, flooding, water quality and natural watercourses. Applicable goals and policies are presented below.

GROWTH MANAGEMENT ELEMENT

Storm Drainage

Performance Standard:

3-S-15 Ensure that new development provides adequate on-site storm drain facilities to accommodate 10- and 25-year flood flows, and that downstream City flood control facilities are not exceeded in 100-year flows.

RESOURCE CONSERVATION ELEMENT

Drainage and Erosion

Policies:

9-P-15 As part of development plans, require evaluation and implementation of appropriate measures for creek bank stabilization, as well as necessary Best Management Practices (BMPs) to reduce erosion and sedimentation. Encourage preservation of natural creeks and riparian habitat as best as possible.

9-P-16 Establish development standards for new construction adjacent to riparian zones to reduce sedimentation and flooding. Standards should include:

- Requirements that low berms or other temporary structures such as protection fences be built between a construction site and riparian corridor to preclude sheet-flooding storm water from entering the corridors during the construction period.
- Requirements for installation of storm sewers before construction occurs to collect stormwater runoff during construction.

9-P-20 As part of project review and approval, establish maintenance districts to ensure uniform maintenance for selected channels and creeks.

9-P-21 As part of project review and CEQA documentation, require an assessment of downstream drainage (creeks and channels) and City storm-water facilities impacted by potential project runoff.

Water Quality

Policies:

9-P-22 Continue working with the Regional Water Quality Control Board in the implementation of the National Pollutant Discharge Elimination System (NPDES), with specific requirements established in each NPDES permit.

9-P-23 Require new urban development to use BMPs to minimize creek bank instability, runoff of construction sediment, and flooding.

9-P-24 Reduce sedimentation and erosion of waterways by minimizing site disturbance and vegetation removal along creek corridors.

9-P-25 Encourage rehabilitation and revegetation of riparian corridors and wetlands throughout the City to contribute to bioremediation and improved water quality.

9-P-27 Protect water quality by reducing non-point sources of pollution and the dumping of debris in and near creeks, storm drains and the Contra Costa Canal. Continue use and implementation of the City's storm drain marking program in newly developed or redeveloped areas.

HEALTH AND SAFETY ELEMENT

Flood Control

Policies:

10-P-18 Evaluate storm drainage needs for each development project in the context of demand and capacity when the drainage area is fully developed. Ensure drainage improvements or other mitigation of the project's impacts on the storm drainage system appropriate to the project's share of the cumulative effect.

10-P-19 Assure through the Master Drainage Plan and development ordinances that proposed new development adequately provides for on-site and downstream mitigation of potential flood hazards.

10-P-20 Develop and implement a Storm Flooding Mitigation Fee Program to fund required drainage improvements during construction of new development.

10-P-21 Encourage the formation of flood control assessment districts for those areas within the 100- and 500-year flood plains (as designated in [General Plan] Figure 10-3). Encourage new hillside developments to form flood control assessment districts to accommodate runoff and minimize downstream flooding, if determined necessary.

10-P-23 All new development (residential, commercial or industrial) should contribute to the construction of drainage improvements in the Kirker Creek and other watersheds in the Planning Area, as required by the City's adopted ordinances.

10-P-24 Allow the construction of detention basins as mitigation in new developments. Ensure that detention basins located in residential neighborhoods, schools or child-care facilities are surrounded by a gated enclosure, or protected by other safety measures.

10-P-27 Adopt practices for development and construction on sites where the erosion potential is moderate to severe.

It is noted that neither the City nor CCCFCWCD have a Storm Flooding Mitigation Fee Program that can be used to fund the construction of drainage improvements along any part of Lawlor Creek, as described in General Plan Policy 10-P-20, or that would allow new development "to contribute to the construction of drainage improvements in... watersheds in the Planning Area," per General Plan Policy 10-P-23. In both cases, a full drainage study would first have to be performed to identify the improvements needed to correct existing flooding conditions and accommodate future buildout of the Lawlor Creek watershed, and to determine proportional funding responsibilities.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with increased project site runoff into natural drainage channels and downstream receiving waters (due to project construction) and also describes water quality concerns related to the proposed development. CEQA Guidelines (2003) state that the project would be expected to have a significant hydrology or water quality impact if it would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation, on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

- create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- inundation by seiche, tsunami, or mudflow; or
- conflict with any applicable land use plan, policy, or regulation adopted by the City of Pittsburg for the purpose of avoiding or mitigating an adverse effect on drainage or water quality.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Details

Proposed Drainage Provisions

The proposed grading operations would eliminate the existing channels that drain the site's three ridge-defined valleys. The project's tentative map indicates that runoff originating uphill, west of the site, would be collected into culverts where each valley intersects the easterly property line.[13] The culverts draining the two southernmost valleys would connect to an underground system that drains approximately the southerly 40 percent of the developed site area. This system would be routed to a single pipe that follows the project's south entrance street to Bailey Road, where it would discharge into a newly constructed earthen channel running north along the west side of Bailey Road. The channel would follow the general line of the existing Lawlor Creek roadside ditch, but, since that ditch meanders into some areas planned for new homesites, parts of it would be reconstructed along a straighter alignment. Near the site's north boundary, this new channel would rejoin the existing ditch where it intersects the outfall from the 6-foot culvert underneath Bailey Road.

The culvert draining the third (northernmost) offsite valley would be connected into an underground pipe system draining the northerly 60 percent (±) of the developed site. The two main branches of this system would follow the road that wraps around the ridge at this end of the site, to a single pipe that exits the site along the project's north entrance road. It would then discharge to the previously described Bailey Road channel, near its intersection with the 6-foot culvert outfall.

A drainage culvert would also be installed at the toe of slope behind several homesites near the north entrance. These homes would be located below a large open space area at the end of the site's

north ridge. Runoff from this slope would be routed to the culvert entrance by a retaining wall extending along the rear lot lines of six parcels. The culvert would connect into the street drainage system that discharges to the pipe in the north entrance road.

Other than the channel realignment described above along the west side of Bailey Road, between the two proposed entrance roads, the Tentative Map does not show any drainage modifications to the north of the site's northerly entrance. There is no indication how the new channel would connect to the existing Lawlor Creek channel to the north of the site, how this connection might affect the existing wetland conditions in the northeast corner of the site, or whether offsite improvements would be needed to make this connection. No improvements or drainage facilities are proposed within the approximately 20 acres of the property located northwest of the main project area.

Installation of the proposed on-site storm drain system would be consistent with City and County subdivision regulations that require the construction of underground storm drains to collect stormwater runoff and convey it through newly developed areas to an outlet at the downstream end of the site. In addition, the culverts that extend into the hills west of the property would be designed to intercept surface runoff and prevent it from flowing directly across private homesites or project improvements. These offsite drains could. also be used to convey groundwater through the development, if subsurface drains are installed at the base of proposed cut slopes beyond the westerly boundary. The project engineers are currently working closely with City and CCCFCWCD representatives to ensure that all on- and off-site storm drainage improvements are designed in accordance with applicable City regulations, County ordinances and CCCFCWCD standards.[14] These include requirements that on-site storm drains have sufficient capacity to accommodate the runoff from a 10-year storm, and that the project not worsen flooding within downstream City flood control facilities during a 100-year storm.

Post-Development Drainage Conditions

Project development would introduce new impervious surfaces (primarily buildings, driveways and roads) onto the undeveloped project site. In addition, underground storm drain systems would collect and convey this runoff off-site more efficiently than the existing small ditches and channels. Land use changes and drainage improvements such as these typically increase the rate of storm water runoff from a site, generating peak downstream flows that are higher than existed before development. Since many areas along the downstream reaches of Lawlor Creek already experience flooding during a range of storm events, this change could potentially worsen existing flooding conditions.

Project drainage calculations indicate that peak flow rates at the downstream Bailey Road culvert crossing would increase by 8.5 percent, or 20 cubic feet per second (cfs), during a 10-year recurrence interval, three hour storm, and by 6.5 percent, (25 cfs) during a 100-year, three hour storm.[15] These calculations defined a 350±-acre watershed located upstream of this point of concentration, with an area of approximately 140 acres draining to the proposed detention basin. There would be no land use changes within the remaining portions of the watershed, located east of Bailey Road and downstream of the site on the west side of Bailey Road, so runoff from these areas would bypass the basin and not be detained. The 123-acre detention basin drainage area

would include about 89 acres on the project site, of which an estimated 65.5 acres would be developed with roads or homesites. The remaining areas would remain as open space or be developed as an on-site park.[16]

The hydrology report also determined that the maximum water elevation in the detention basin during a 10-year storm would be just over 516 NGVD, with approximately 2.38 acre feet of stored runoff. During a 100-year storm, storage would increase to 5.13 acre feet, at a maximum elevation of 518 NGVD. According to the calculations, the resulting peak discharge rates during both storm events would not exceed pre-development conditions, although total runoff volume within the 350±-acre watershed would increase by 4.25 percent and 2.75 percent (respectively) during the 10- and 100-year storms.

Project Impacts

Increased Rate of Runoff

IMPACT 4.3-1: Increased rates of storm water runoff from the project site could exceed existing flow capacities within downstream drainage facilities, potentially causing an increase in the extent or duration of flooding.

Construction of a detention basin would reduce peak flow rates in accordance with General Plan Standard 3-S-15 and Policy 10-P-24, but it would not ensure that "downstream... facilities are not exceeded in 100-year flows" (Policy 3-S-15). These downstream facilities already lack sufficient capacity to accommodate peak flows during even minor storms. The basin would also provide for "downstream mitigation of potential flood hazards" (Policy 10-P-19), but there is no indication the project would incorporate "high infiltration measures" to reduce flooding and runoff (Policy 10-P-26). It is noted, though, that the site presents few opportunities to promote infiltration by routing runoff across lawns and open space areas, because it could potentially destabilize the natural hillsides and newly terraced cut-and-fill slopes.

Once a final site plan is approved, the project engineer would prepare revised drainage calculations for the project site, and CCCFCWCD officials would then perform a final hydrologic modeling to estimate the anticipated changes in off-site flow rates. These calculations should confirm that the preliminary description of the detention basin's contributing drainage area accurately reflects the design conditions (estimates prepared for this report suggest the drainage area is approximately 13 percent larger than indicated in the preliminary hydrology report), and that the basin's discharges are timed to reduce overall flow rates when combined with unattenuated flows from undeveloped areas on the east and west sides of Bailey Road. It is possible these refinements would require either a larger basin, which could affect the area of wetland impacts, and/or a modified outlet structure.

It is expected these modifications could be accommodated at the proposed detention basin site, if needed, but it is not clear they would prevent any increase in downstream flooding during the more frequent, less severe storm events. As noted in the Setting, several areas (most notably Ambrose

Park) are already subject to extensive, prolonged flooding during minor storms, and this flooding could become worse if the basin lets the lower flows generated by these storms pass through unattenuated.

As also noted in the Setting, final design studies would have to include a soils report, as previously described, to estimate the rate of sediment production. This report would also have to include geotechnical evaluations of all issues related to basin stability and operation. These issues typically include soil permeability, groundwater seepage, slope stability and liquefaction risk. In addition, because the basin is to be located adjacent to Bailey Road, the geotechnical study would have to confirm that the stored water would not weaken or otherwise destabilize the roadway embankment.

Basin designs would also have to address the need for warning and safety features, in accordance with General Plan Policy 10-P-24 and CCCFCWCD regulations, if there is any potential for high flow velocities and/or deep standing water.

The project applicant would be required to establish a maintenance assessment district or other public funding mechanism, as approved by the CCCFCWCD and the City and in accordance with General Plan Policies 9-P-20 and 10-P-21, to provide a dedicated funding source. To facilitate this maintenance, the project engineer would be required to develop a detailed, easily understood operation and maintenance manual that establishes a regular monitoring schedule and addresses all items related to proper basin management. These items would include, but not necessarily be limited to, sediment removal and disposal, weed and trash abatement, structure and embankment maintenance, service vehicle access, limitation of liability and permitting requirements. Details of a sediment removal program would have to include calculations of the total volume of storage needed at the beginning of each rainy season to accommodate five years' maximum anticipated sediment load plus the runoff from a worst case rainfall event. This information would be used to establish the level at which accumulated sediment would have to be removed prior to the beginning of the rainy season.

All of the following mitigation measures are required to reduce peak storm water runoff impacts to a less-than-significant level.

❑ **MITIGATION MEASURES:**

4.3-1A: The applicant shall construct an on-site storm water detention basin, as needed to reduce peak rates of runoff from the project site for the design storm to a level that does not exceed pre-development conditions. The basin design data shall be subject to review by CCCFCWCD and approval by the City Engineer. If there is a cost for the CCCFCWCD review, it shall be borne by the applicant.

4.3-1B: Because several downstream sections of Lawlor Creek lack the capacity to accommodate peak rates of storm water runoff during a wide range of storm events, the detention basin shall be designed to reduce project discharges for storms in which it has been determined that downstream flooding would

be likely to increase following project development, instead of just during the 10-year and larger storms.

4.3-1C: Prior to recordation of the final map, the project engineer shall determine the required storage volume and final design of the detention basin, discharge structure and all appurtenant facilities, which determination shall be subject to the review by the CCCFCWCD and approval by the City Engineer. The final design analysis shall include without limitation a basin routing study, including an evaluation of all watershed parameters to ensure that pre- and post-development conditions are accurately characterized, and shall address the need for warning and safety features if any potential exists for high flow velocities and/or deep standing water. The CCCFCWCD will perform a final hydrologic modeling to estimate the anticipated changes in off-site (downstream) flow rates. Thereafter, the primary spillway, storage capacity and other parameters will be adjusted as necessary so that the basin's discharges are timed to reduce overall flow rates. In the event that the CCCFCWCD determines that the basin requires either a larger storage capacity and/or refinement in the design of the outlet structure, the project applicant shall undertake such refinements at its expense.

4.3-1D: The detention basin shall be offered for dedication to the Geologic Hazards Abatement District. If not maintained by the GHAD, an entity acceptable to the City with assured long-term funding shall maintain the basin.

4.3-1E: The project engineer shall submit a maintenance plan for the basin, subject to review and approval of the City Engineering Department. The plan shall indicate maintenance access, plan for disposal for sediment excavated from the basin, criteria for triggering removal of sediment from the basin, annual inspection by the project engineer, estimated annual maintenance costs over a 25-year period, and other maintenance parameters identified by the City Engineering Department.

4.3-1F: The project engineer shall submit a fencing plan for the detention basin/service road acceptable to the City Planning Division and Engineering Department.

Increased Volume of Runoff

IMPACT 4.3-2: Increases in the total volume of storm water runoff from the project site could destabilize or otherwise adversely affect flow capacities within downstream drainage facilities, potentially destabilizing downstream drainageways and increasing the extent or duration of existing flooding.

Detention basins are typically designed to prevent future *peak* rates of storm water runoff from exceeding pre-development flow rates. As a general rule, they do not affect the total volume of flow, which normally increases when infiltration rates are lowered in newly developed areas. This excess water is held back for a time in the detention basin, but it is eventually all released, lengthening the duration of higher flows that occur in response to a rain storm. Prolonged, high flows in the earthen channel that carries Lawlor Creek from the project site to West Leland Road and from Hanlon Way to Willow Pass Road could oversaturate the banks and cause increased erosion. This erosion would decrease water quality and potentially cause silt deposition that would block downstream culverts and drainage structures, resulting in increased flooding and higher maintenance costs. It could also cause increased flooding in areas where deficient flow capacity already causes water to back up, such as Ambrose Park. It would not be expected to adversely affect the existing culvert under the Contra Costa Canal, though, since water that cannot get into this structure simply backs up and floods the park.

As previously noted, the project's preliminary hydrologic model indicates the total volume of runoff in the 396-acre watershed would increase by only 4.25 percent during a 10-year storm. Increases of this magnitude should not be difficult to control with detention storage during 10-year and smaller storms (which is when most downstream erosion would be expected to occur), but it is recommended the final design analysis carefully evaluate all watershed parameters to ensure that both pre- and post-development conditions are being accurately characterized. Since downstream areas are already subject to flooding, and since the existing Lawlor Creek channel may be particularly susceptible to erosion and destabilization, it is important to identify the worst case conditions for design of the project's detention basin.

❑ **MITIGATION MEASURE 4.3-2:** To mitigate the effect of the increased volume of runoff in the downstream water course, peak runoff from the graded and developed site shall be reduced by 5 percent below the pre-development runoff (for the 10-year design storm). The design of the detention basin shall also keep the peak flows for the 5-year storm at (or below) the pre-development peak.

Erosion and Sedimentation

IMPACT 4.3-3: Even with effective implementation of erosion control measures, clearing and mass grading activities during project construction will increase on-site soil erosion, potentially resulting in increased turbidity and sedimentation within downstream sections of Lawlor Creek.

Sediment deposition in the stream reaches located between the project site and West Leland Road could restrict flow capacity and cause localized bank failures as the channel realigns itself to flow around the blockages. Deposition could also block culverts on Bailey Road, at the Keller Canyon Landfill, on West Leland Road and through Ambrose Park, and at Hanlon Way, resulting in a need

for increased maintenance. Higher turbidity levels would be expected to extend throughout the length of Lawlor Creek, degrading water quality all the way to Suisun Bay.

Because project development would disturb more than one acre, the applicant would be required to obtain an NPDES general construction permit from the State Water Resources Control Board. The terms of this permit require applicants to prepare a Storm Water Pollution Prevention Plan (SWPPP) that demonstrates project development would not cause any increase of sedimentation, turbidity, or hazardous materials concentrations within downstream receiving waters. The City Engineering Department would monitor implementation of the project's approved SWPPP, with a particular focus on construction period erosion control.

Design requirements and implementation measures for project-specific erosion and sedimentation controls would be set forth in the applicant's SWPPP, in accordance with state and Regional Water Quality Control Board (RWQCB) design standards. It has been demonstrated that the measures presented below, when properly designed and implemented, can reduce construction-related effects on storm water runoff quality to less-than-significant levels. Additional design and implementation recommendations are included in the Construction Handbook of Best Management Practices.[17]

Following the completion of project construction, the likelihood of on-site erosion within developed areas would be significantly reduced because all disturbed ground would be stabilized underneath buildings, pavement, and landscaping. However, proposed cut slopes along the western edge of the development area, as well as the steep hillside proposed to be maintained as open space within this area, could be subject to gullying and erosion if not properly stabilized and revegetated where disturbed, and if not maintained throughout the life of the project. These on- and off-site features could contribute to continued sedimentation within downstream drainage facilities and would have to be addressed in the project's long-term water quality protection plan.

Implementation of the following mitigation measure would bring the project into consistency with General Plan Policies 9-P-15, 9-P-16, 9-P-22, 9-P-23, 9-P-24, 9-P-25 and 10-P-27. Refer to the discussion of erosion and sedimentation as a result of grading activities in Section 4.2: Geology/Soils/Seismicity. Also refer to Mitigation Measure 4.2-5A, which applies to this impact, as well.

❑ **MITIGATION MEASURE 4.3-3:** The applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP) to control on-site erosion in accordance with National Pollution Discharge Elimination System (NPDES) regulations and subject to the approval of the City Engineering Department and the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). The provisions of this plan shall be implemented throughout the project site and shall include the following:

- Leave existing vegetated areas undisturbed until construction of improvements on each portion of the development site is ready to begin;
- Immediately revegetate or otherwise protect all disturbed areas from both wind and water erosion upon the completion of grading through the use of mulch and/or jute netting blankets;

- Collect storm water runoff into stable drainage channels, from small drainage basins, to prevent the buildup of large, potentially erosive storm water flows;
- Direct runoff away from all areas disturbed by construction;
- Use sediment ponds or siltation basins to trap eroded soils before runoff is discharged into on-site or off-site drainage culverts and channels;
- Schedule major site development work involving excavation and earthmoving for construction during the summer construction season from April 15 through October 1 (any earthwork undertaken after October 1 shall be limited to activities directly related to erosion control); and
- Develop and implement a program for the handling, storage, use and disposal of fuels and hazardous materials. The program shall also include a contingency plan covering accidental hazardous material spills.

Water Quality

IMPACT 4.3-4: The quality of downstream receiving waters would be lowered if non-point source urban pollutants generated within newly developed areas are washed into Lawlor Creek by storm water runoff from the project site.

In residential areas, non-point source pollutants include litter, landscaping fertilizers and pesticides, and the heavy metals, oil and gas residues, tire fragments and debris normally deposited by vehicular traffic. Storm water runoff from developed areas would carry these pollutants into surface waters, where they would cause a small, but cumulative degradation of water quality. There also would be continued production of sediment within undeveloped areas on and off the project site, but it is expected this pollutant source would be addressed through proper stabilization and revegetation of these areas, and through implementation of the previously described detention basin operation and maintenance plan.

Source Control and Pre-Discharge Treatment Measures

The Contra Costa Countywide Clean Water Program includes both source control and pre-discharge treatment measures that could be appropriate for the project site. Typical source controls include painting "Drains to the Bay" labels on storm drains, prohibiting the use of non-biodegradable fertilizers and pesticides, restricting vehicle maintenance and washing to areas not connected to the storm drain system, and regular cleaning and maintenance of all streets and parking areas, particularly at the onset of the rainy season, to reduce the build-up of urban pollutants and debris that are normally washed into storm drains.

Pre-discharge treatment measures are put in place to remove storm water contaminants that bypass source controls. They are normally designed in accordance with "best management practices," and generally fall into two categories. The first category is media filtration, in which runoff is routed through filters that remove suspended sediments and through oil/water separators that skim floating

grease, petroleum products and debris from the surface of runoff. These devices are installed in individual catch basins, or else the runoff from a series of catch basins is routed through a single, large structure that performs the same function. Both facilities require regular inspection, cleaning and the disposal of trapped contaminants, and so are often better suited for implementation on commercial or multi-family residential properties, where a single owner is usually responsible for area-wide maintenance.

The second category of pre-discharge treatment utilizes small ponds or gently sloping swales to achieve contaminant removal. The ponds temporarily hold back storm water runoff (as in flood control detention basins), giving sediments a chance to settle out before off-site discharge, while grass-lined swales pick up contaminants as the water slowly filters through the surface vegetation. The contaminants that adhere to the grass can then be removed by regular mowing.

Application to Proposed Project

Because the project site is generally steep and hilly, it appears the only area where a grassy swale could be constructed is along Bailey Road, where the roadside ditch that comprises the upper reach of Lawlor Creek is now located, and inside the proposed detention basin. It appears this ditch could provide some water quality treatment, depending on the final design of the realigned channel. The project's Tentative Map calls for an 8 percent slope alongside Bailey Road, though, which would generate high flow velocities that are typically not conducive to filtration. As a result, a series of small drop-structures would most likely have to be constructed to control velocities within acceptable limits.

Storm water runoff would also receive treatment in the proposed detention basin if the discharge structure is designed to detain water during virtually all rainfall events. Higher flow capacities needed to accommodate major storms would still be maintained, but the "first flush" of runoff, which normally contains the highest concentration of contaminants, would be held back through "extended" detention to allow contaminants not picked up by an upstream grassy swale to settle out before discharge. This additional design consideration would have to be included with those described in previous mitigation measures to control the rate and volume of runoff.

Design criteria for treatment systems is presented in the Municipal Best Management Practices Manual. If, as an example, an 80 percent level of pollutant capture is desired, a filtration swale would require approximately 1,200 square feet of effective swale area for every acre of impervious surface that is directly connected to the storm drain system (directly connected refers to runoff that does not first flow across lawns or open space areas). For extended detention basins, developments in which 30 percent of the total area is covered by directly connected impervious surface would require approximately 0.02 acre feet of storage per gross acre of watershed. The treatment provided by these two methods could be combined and balanced to achieve an overall level of pollutant removal judged acceptable for the total development site.

Approval Process

The design of all long-term water quality protection measures to be incorporated into the SWPPP would be the responsibility of the applicant, subject to approval by the City Engineering Department and CCCFCWCD, in accordance with General Plan Policy 9-P-27. The plan would also have to describe how these measures would be implemented during project construction, and it would clearly identify the funding source and parties responsible for periodic maintenance, as needed to ensure the continued performance of all pollution control facilities throughout the life of the project.

❑ **MITIGATION MEASURE 4.3-4:** To help reduce the long-term accumulation of non-point source pollutants within downstream surface waters, the applicant shall incorporate long-term source control and pre-discharge treatment measures into the *Storm Water Pollution Prevention Plan* (SWPPP) recommended in Mitigation Measure 4.3-3 above, in accordance with the Contra Costa Countywide Clean Water Program, subject to the approval by the City Engineering Department and the CCCFCWCD (see details above).

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[1] CSW/Stuber-Stroeh Engineering Group, Inc., Preliminary Hydrology Analysis for Bailey Estates, April 2, 2001.

[2] U.S. Geological Survey, 7.5 Minute Topographic Map, Honker Bay Quadrangle, 1979.

[3] Drainage area estimates in the project vicinity and along downstream reaches of Lawlor Creek based on measurements prepared for this EIR by Andrew Leahy, P.E.

[4] United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Contra Costa County*, October 1992.

[5] Contra Costa County Flood Control and Water Conservation District, "Mean Seasonal Isohyets," and "Precipitation Duration-Frequency-Depth Curves," 1977.

[6] U.S. Department of Agriculture, Soils Conservation Service, *Soil Survey for Contra Costa County*, 1985.

[7] Jim Wilson, Contra Costa County Flood Control and Water Conservation District, Response to Notice of Preparation and Initial Study for Bailey Estates, February 28, 2001.

[8] The State Storm Water Task Force is a committee of the California Chapter of the American Public Works Association.

[9] California Regional Water Quality Control Board, *San Francisco Bay Basin Water Quality Control Plan*, 1986.

[10] City of Pittsburg, *San Marco Development EIR*, October 1992.

[11] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

[12] Ibid.

[13] CSW/Stuber-Stroeh Engineering Group, Inc., Bailey Estates, Vesting Tentative Map, February 2000.

[14] Wayne Leach, CSW Stuber-Stroeh Engineering Group, Inc., personal communication, May 23, 2001.

[15] Op. cit., CSW/Stuber-Stroeh Engineering Group, Inc., Preliminary Hydrology Analysis for Bailey Estates.

[16] Except for the 350±-acre watershed measurement, drainage area estimates based on measurements prepared for this EIR by Andrew Leahy, P.E.

[17] Camp Dresser & McKee, Larry Walker Associates, Uribe & Associates, Resources Planning Associates, for the State Storm Water Quality Task Force (a municipal agency advisory body), "California Storm Water Best Management Practice Handbooks: Construction Activity," March 1993.

4.4 TRANSPORTATION/CIRCULATION

Setting

Methodology

Evaluation has been conducted of project traffic impacts during both the morning and evening commute peak traffic hours at major intersections along Bailey Road in the cities of Pittsburg and Concord, including both project access intersections along Bailey Road. Evaluation has been conducted for near term (year 2005), year 2010, and cumulative year 2025 conditions. On-site circulation and parking adequacy have also been evaluated. Measures have been recommended to mitigate all significant impacts due to the project as well as to improve locations with existing operating deficiencies.

Roadways

The following roadways serve the project area:

Bailey Road is a major arterial roadway extending from the City of Pittsburg southerly into the City of Concord. In the project vicinity it has two travel lanes, minimal paved or graded shoulders and numerous horizontal and vertical curves, although the road is relatively straight along about half of the site frontage. There is a general south-to-north downhill gradient from the site to the roadway's end at Willow Pass Road. Likewise, just south of the project there is a general north-to-south downhill gradient into Concord. The posted speed limit is 45 miles per hour adjacent to the site, although curves immediately north and south of the site are posted for speeds of 35 to 40 miles per hour. North of the site (near West Leland Road), Bailey Road widens to a four-lane facility with a raised median. South of the site in Concord, Bailey Road remains a two-lane facility. The Contra Costa Transportation Authority (CCTA) has identified Bailey Road between Willow Pass Road and West Leland Road as a Route of Regional Significance.

West Leland Road is a four-lane main arterial roadway running in a general east-west direction parallel to and south of the State Route 4 freeway in Pittsburg. The roadway now terminates about half a mile west of Bailey Road, but is planned to be extended westerly as part of the Alves and San Marco developments to San Marco Boulevard and ultimately Avila Road. CCTA has identified West Leland Road as a Route of Regional Significance.

State Route 4 (SR4) is a four- to ten-lane freeway running in an east-west direction through the City of Pittsburg. It continues westerly to the cities of Concord and Hercules to connections with the I-680 and I-80 freeways, and easterly to the cities of Antioch, Brentwood and Stockton. SR4 has been widened west of Bailey Road to an eight-lane facility (with ten lanes over the Willow Pass Grade), but narrows just east of the Bailey Road interchange to a six-lane facility for the majority of the distance to the Railroad Avenue interchange, with two additional mixed flow lanes about to open between the Bailey Road and Railroad Avenue interchange. Single high occupancy vehicle (HOV) lanes are provided in each direction from just west of the Railroad Avenue interchange and across the Willow Pass grade. CCTA has identified SR4 as a Route of Regional Significance.

Study Intersections

Intersections, rather than mid-block roadway segments, are almost always the critical capacity controlling locations for urban and suburban roadway networks. Eight intersections (six existing, two planned) were selected by the City as most likely to be affected by the project and thus warranting analysis in this EIR. Five of these intersections are signalized; one is side street stop-sign controlled and the two future intersections (both project access connections to Bailey Road) will be stop-sign controlled. The eight study intersections are shown on Figure 4.4-1, while Figure 4.4-2 shows a schematic presentation of existing approach lane configurations and associated control systems at each location. Study intersections are:

- Bailey Road/SR4 WB Ramps-Canal Road (signalized)
- Bailey Road/SR4 EB Ramps-BART Station Access Road (signalized)
- Bailey Road/Maylard Road-Shopping Center (signalized)
- Bailey Road/West Leland Road (signalized)
- Bailey Road/Myrtle Drive in the City of Concord (Myrtle Drive stop sign controlled)
- Bailey Road/Concord Boulevard in the City of Concord (signalized)
- Bailey Road/Street N (North Project Access) (project access stop-sign controlled)
- Bailey Road/Street O (South Project Access) (project access stop-sign controlled)

Bicycle and Pedestrian Facilities

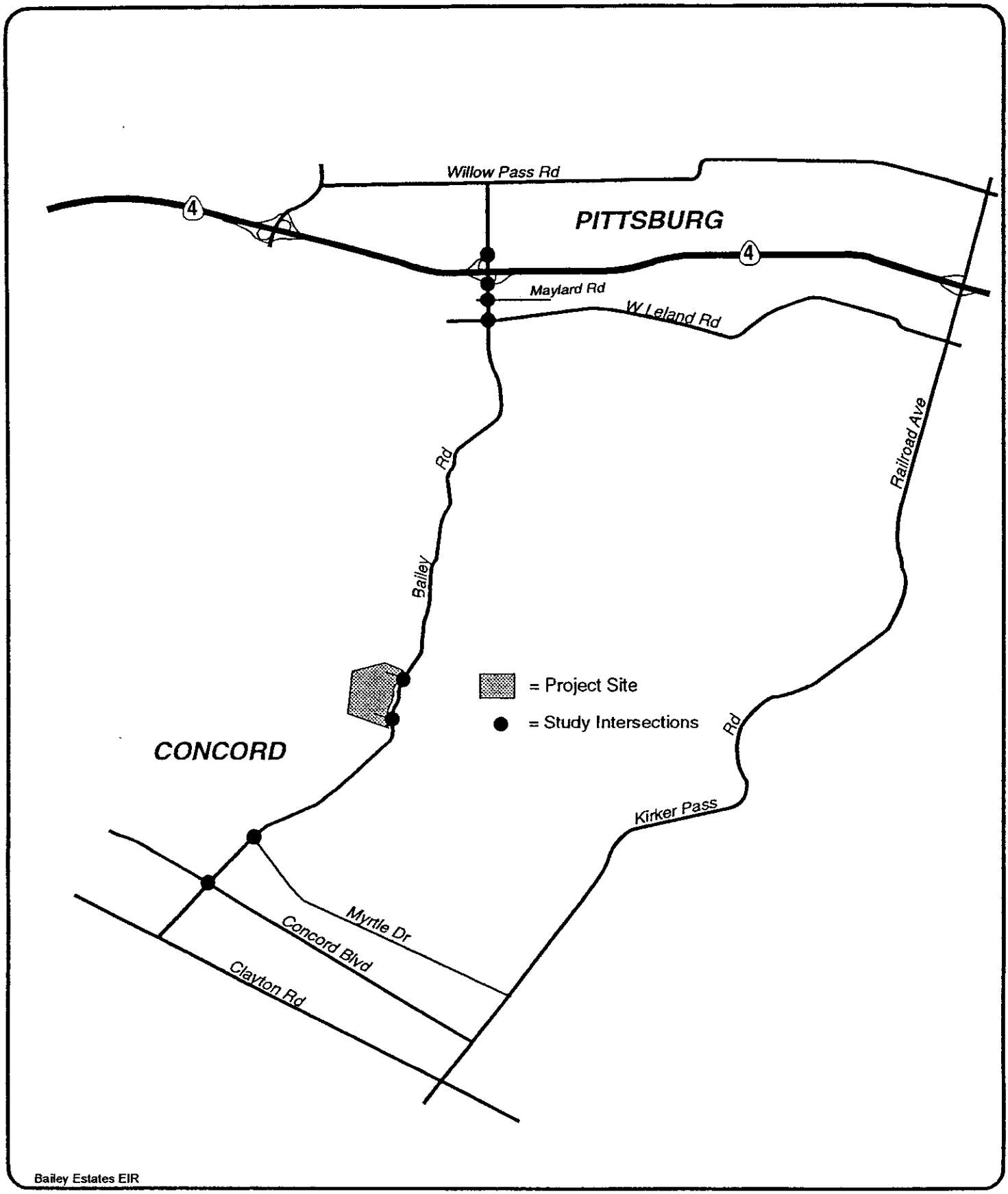
There are no sidewalks and only minimal to no paved shoulders along Bailey Road in the vicinity of the proposed project. Sidewalks are provided along Bailey Road two miles north of the site starting in the vicinity of West Leland Road.

Public Transit

There are no public bus routes running along Bailey Road adjacent to the project site. The Bay Point BART station (including Tri Delta Transit bus routes serving the station) is located approximately two miles north of the site adjacent to the SR4 freeway.

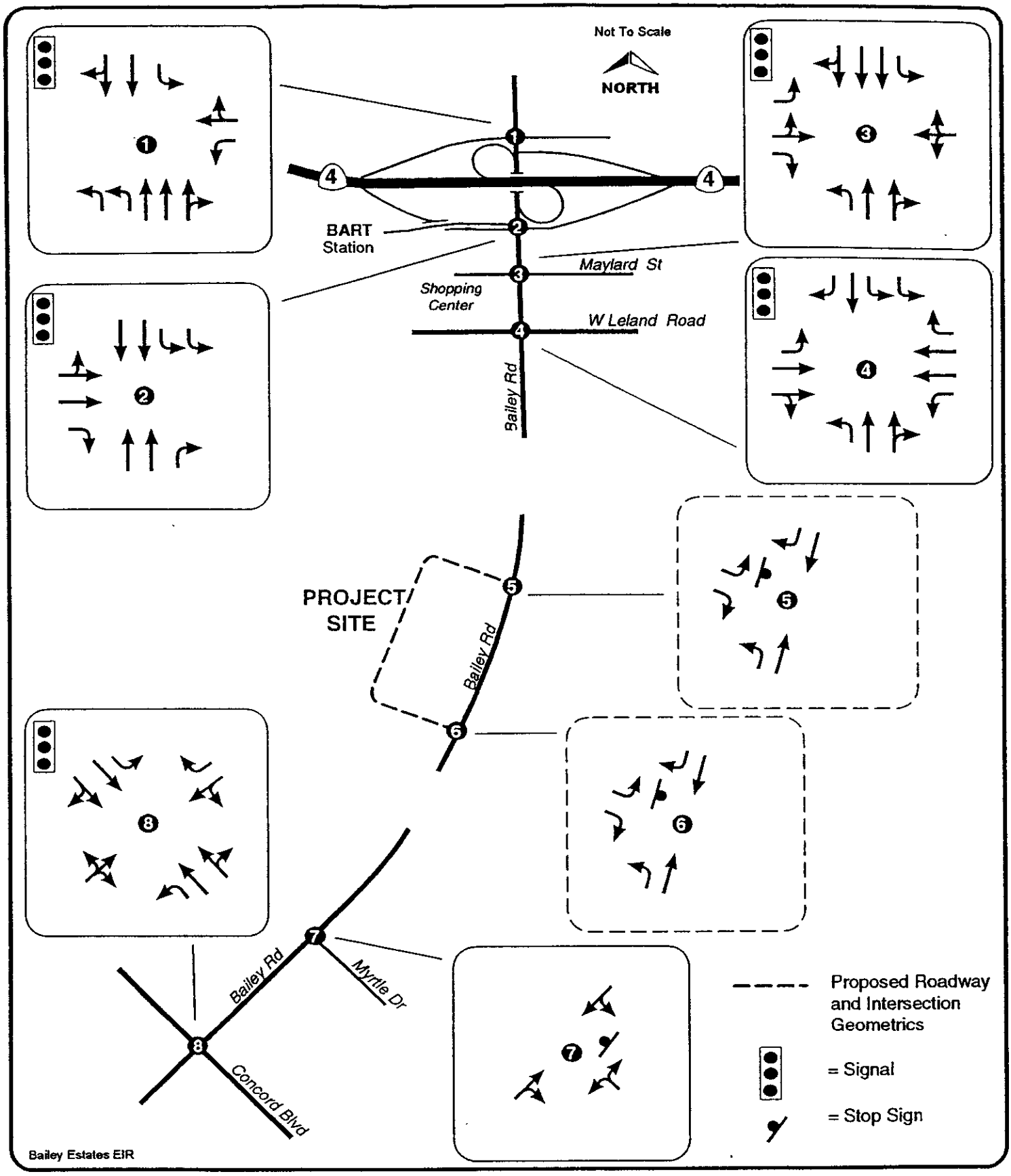
Volumes

The EIR traffic consultant reviewed existing weekday AM and PM peak period traffic counts (7:00–9:00 a.m. and 4:00–6:00 p.m.) conducted in March and June 2000 by Fehr & Peers Associates for the Alves Ranch Development Draft EIR and those conducted in October and November 2000 by Crane Transportation Group for the Bay Point BART Station Specific Plan EIR. A coordinated system of existing AM and PM peak hour counts was developed and is presented in Figures 4.4-3 and 4.4-4, respectively. Count results indicate that the morning commute peak traffic hour at most intersections occurs from 7:15 to 8:15 a.m., while the evening commute peak traffic hour at most locations occurs from 5:00 to 6:00 p.m.



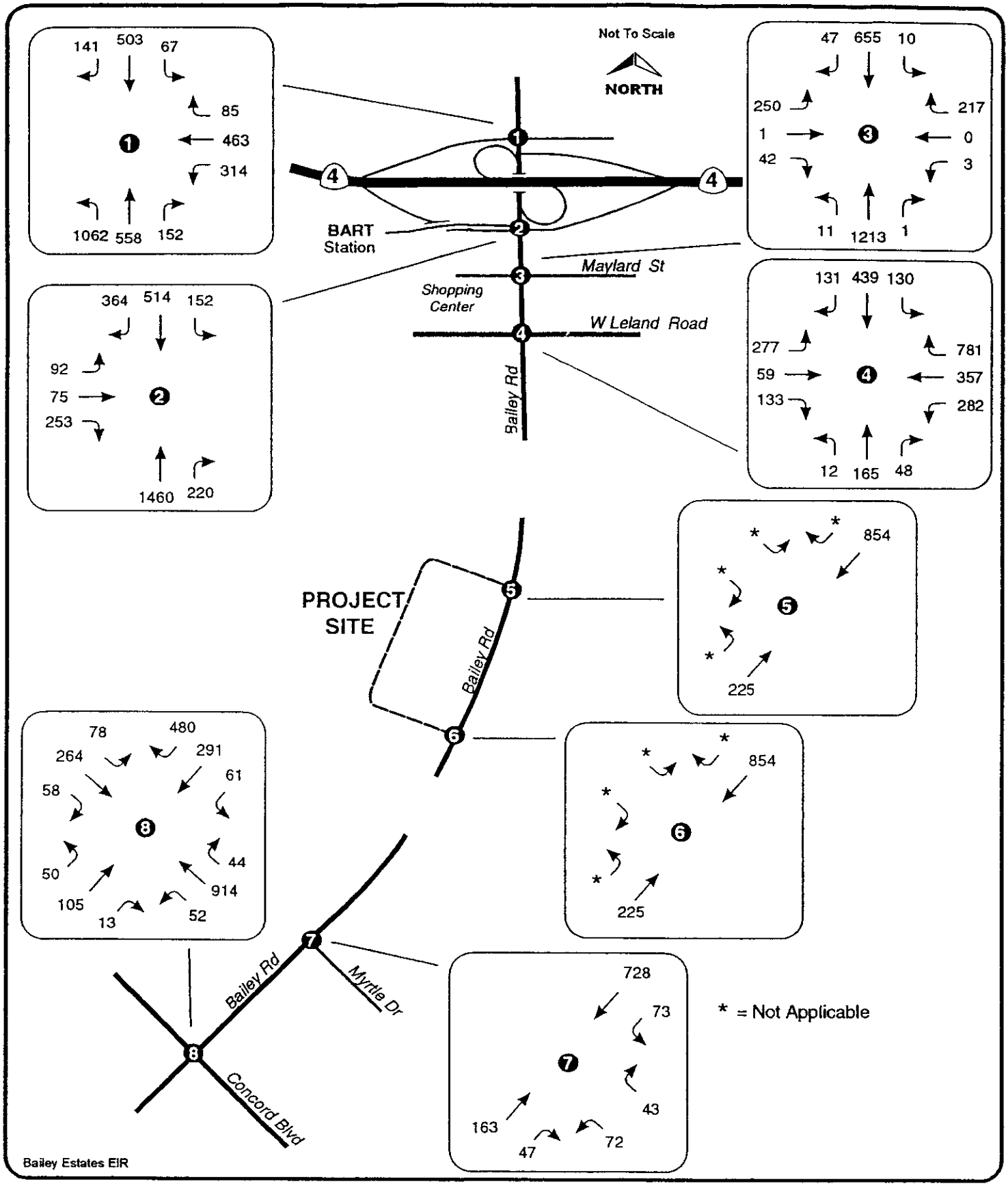
Source: Crane Transportation Group

Figure 4.4-1 Area Map of Study Intersections



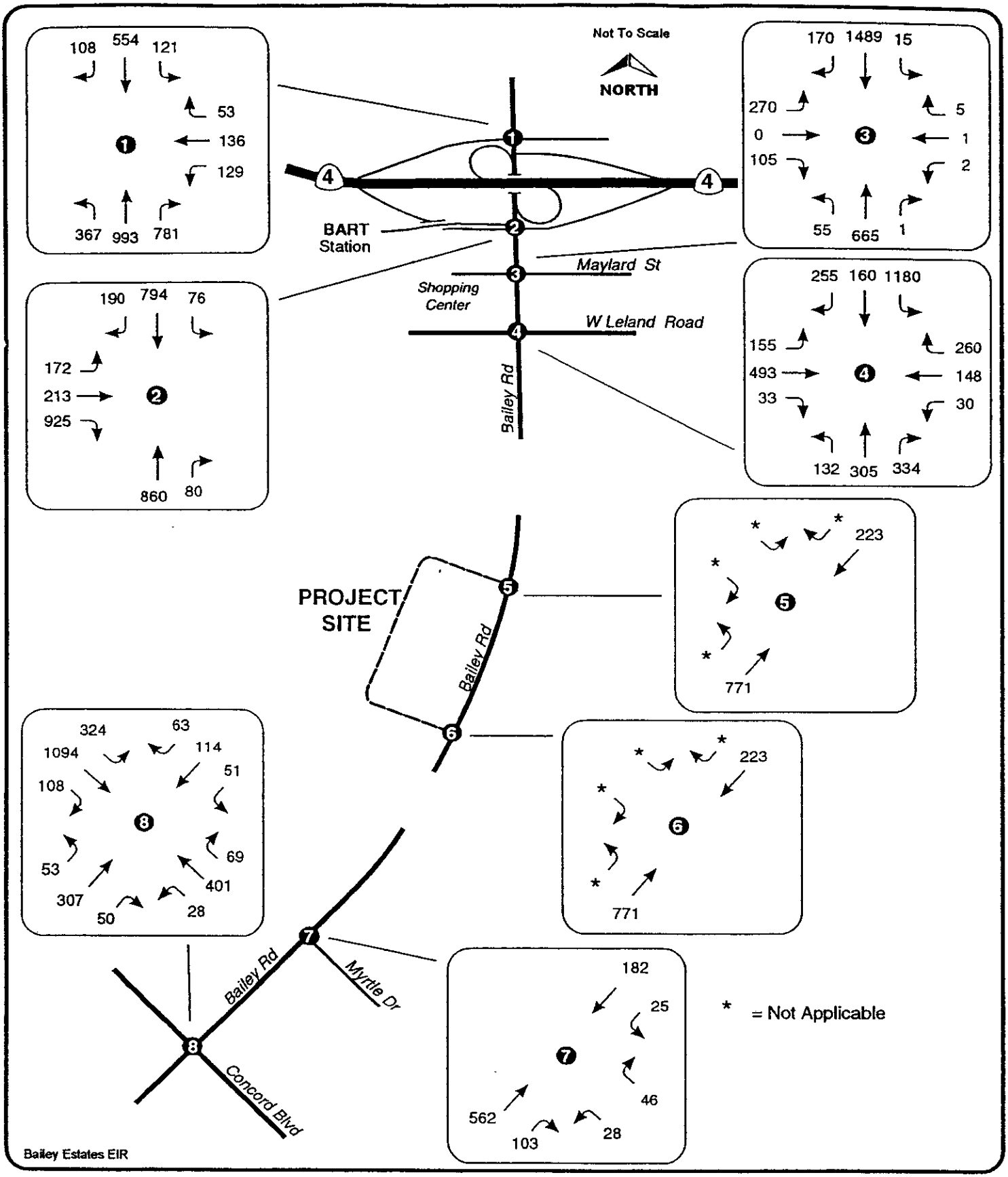
Source: Crane Transportation Group

Figure 4.4-2 Existing Intersection Geometrics and Control



Source: Crane Transportation Group

Figure 4.4-3 Existing Volumes AM Peak Hour



Source: Crane Transportation Group

Figure 4.4-4 Existing Volumes PM Peak Hour

Intersection Operation

Analysis Methodology

Signalized Intersections. Intersections typically are the capacity controlling locations for any circulation system. Signalized intersections were analyzed using the Contra Costa Transportation Authority's Volume-to-Capacity Contra Costa (VCCC) procedures. The VCCC method is based on the Transportation Research Board's (TRB) Circular 212 Planning Procedures; however, the lane capacities have been adjusted to reflect actual conditions in Contra Costa County. The method gives a Level of Service (LOS) grade of A through F for the intersection as a whole as well as a volume-to-capacity (V/C) ratio for the sum of the intersection's approaches. The Level of Service scale ranges from Level A, indicating uncongested flow and minimum delay to drivers, down to Level F, indicating significant congestion and delay on most or all intersection approaches. Greater detail regarding the LOS/volume to capacity relationship is provided in the Appendix C Table C-1.

Unsignalized Intersections. Unsignalized intersection operation is also typically graded using the Level of Service A through F scale. LOS ratings for all-way stop intersections are determined using a methodology outlined in the December 1997 update of the *Highway Capacity Manual* (TRB Circular 209). Under this methodology, all-way stop intersections receive one LOS designation reflecting operation of the entire intersection. Control delay values are also calculated. Intersections with side streets only stop sign controlled (two-way stop control) are also evaluated using the LOS and control delay scales using a methodology outlined in the December 1997 *Highway Capacity Manual.* However, unlike all-way stop analysis where the LOS and control delay designations only pertain to the entire intersection, in side street stop sign control analysis LOS and delay designations are computed for the stop sign controlled approaches or individual turn and through movements. Appendix C Table C-2 provides greater detail about unsignalized analysis methodologies.

Standards of Operation

City of Pittsburg Community Development Department staff [1] has indicated that the following standards should be utilized to evaluate operation of all intersections along Bailey Road within Pittsburg:

> *Signalized Intersection Minimum Acceptable Operation: LOS E V/C = .99*
>
> *Unsignalized Intersection Minimum Acceptable Operation for any Approach or Movement: LOS E*

The City of Concord Transportation Manager[2] has indicated that Bailey Road is not currently considered a Route of Regional Significance in Concord and that the following standards should be utilized to evaluate operation of all intersections along Bailey Road within Concord:

> *Signalized Intersection Minimum Acceptable Operation: LOS D V/C = .89*
>
> *Unsignalized Intersection Minimum Acceptable Operation for any Approach or Movement: LOS D*

Existing Intersection Level of Service

Table 4.4-1 presents the existing intersection levels of service for AM and PM peak hour conditions. As shown, all eight intersections, both in Pittsburg and Concord, are currently operating within acceptable levels during both the AM and PM peak hours. Although this standard evaluation methodology indicates acceptable operation, there are currently backups on the northbound Bailey Road approach to the westbound SR4 on-ramp intersection during the AM peak hour which extend southerly through the SR4 eastbound ramps, Maylard Road and West Leland Road intersections. Likewise, during the evening commute peak hour there are currently backups from the left-turn lanes on the southbound Bailey Road approach to West Leland Road that extend through the Maylard Road and SR4 eastbound ramps intersections. Backups during both time periods were observed to be caused by two factors:

- The lack of adequate signal progression between intersections in the peak flow direction, and
- The lack of extended storage in the second (shorter) left-turn lanes on the northbound Bailey Road approach to the SR4 westbound on-ramp and on the southbound Bailey Road approach to West Leland Road. The single travel lanes leading into both dual left-turn pockets are unable to deliver traffic quickly enough into both turn lanes in order for them to operate at maximum efficiency during peak traffic periods.

Intersection Signalization Needs

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times they are needed to provide side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

There are eleven possible tests for determining whether a traffic signal should be considered for installation. These tests, called "warrants," consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. Usually, two or more warrants must be met before a signal is installed. In this report, the test for Peak Hour Volumes (Warrant #11) has been applied. When Warrant 11 is met there is a strong indication that a detailed signal warrant analysis covering all possible warrants is appropriate. These rigorous analyses are described in Chapter 9 of the Caltrans Traffic Manual while Warrant 11 is presented as Table C-3 in Appendix C of this report.

Currently, both AM and PM peak hour volumes at the Bailey Road/Myrtle Drive intersection are below urban peak hour signal warrant criteria levels.

Table 4.4-1
Existing Intersection Capacity Conditions
AM and PM Peak Hours

Intersection	Existing Traffic Control	AM Peak Hour	PM Peak Hour
Bailey Rd./SR4 WB On-Ramp–Canal Rd.	Traffic Signal	D-0.88[1]	B-0.66[1]
Bailey Rd./SR4 EB Ramps–BART Station Access	Traffic Signal	B-0.62[1]	D-0.81[1]
Bailey Rd./Maylard St.– Shopping Center	Traffic Signal	A-0.59[1]	A-0.49[1]
Bailey Rd./West Leland Rd.	Traffic Signal	D-0.87[1]	C-0.77[1]
Bailey Rd./North Project Access	Future	NA	NA
Bailey Rd./South Project Access	Future	NA	NA
Bailey Rd./Myrtle Drive (City of Concord)	Stop sign (On Myrtle)	D-26.2[3]	C-16.9[3]
Bailey Rd./Concord Blvd. (City of Concord)	Traffic Signal	B-0.68[1]	C-0.73[1]

[1] Signalized level of service - volume to capacity ratio.
[2] Unsignalized level of service–average vehicle delay in seconds. Project access road stop sign controlled left turn/right turn.
[3] Unsignalized level of service–average vehicle delay in seconds. Myrtle Drive stop sign controlled approach.
NA = Not applicable.
Signalized Analysis Methodology: Contra Costa County Transportation Authority.
Unsignalized Methodology: 1997 Highway Capacity Manual.
Source: Crane Transportation Group, April 2001; Abrams Associates, July 2003.

Existing Freeway Operation

Appendix C Table C-4 presents existing AM and PM peak hour operating conditions on the SR4 freeway to the east and west of the Bailey Road interchange. Currently, the freeway has three lanes in each direction to the east of Bailey Road and four lanes in each direction just west of the Bailey Road interchange (one high occupancy vehicle lane and two to three mixed flow lanes in each direction). A fifth (auxiliary) lane is also provided in each direction over the Willow Pass Grade between the Bay Point and Willow Pass Road (Concord) interchanges. Construction is almost complete on a fourth (mixed flow) lane in each direction from the Bailey Road interchange easterly to the eastbound off/westbound on ramps at the Railroad Avenue interchange. At City staff request, existing freeway operating conditions have been determined with these soon-to-be-completed lanes in operation.

The Contra Costa Congestion Management Program (CMP) had originally established the level of service standard for SR4 in Pittsburg as LOS F.[3] However, the recent *East County Action Plan*[4] has eliminated level of service and volume-to-capacity (V/C) ratio evaluation for freeways, although County staff still considers LOS and V/C determinations a useful analysis for informational purposes. Based upon the 1997 *Highway Capacity Manual*, the projected maximum acceptable capacities for freeway analysis are 2,350 passenger car equivalents (pce) per hour for regular travel lanes; 1,800 pce per hour for high occupancy vehicle (HOV) lanes; and 1,000 pce per hour for auxiliary lanes between interchanges.

As shown in Appendix C Table C-4, with soon-to-be-completed improvements the SR4 freeway will be operating well under capacity east and west of the Bailey Road interchange during both the AM and PM commute peak traffic hours. This projection is based upon expected volume levels and available capacity. However, it is probable that during the PM peak traffic hour eastbound traffic will back up from the vicinity of the Railroad Avenue interchange where the four eastbound travel lanes merge to two lanes. These backups will potentially extend to and past the Bailey Road interchange. Thus, while theory would suggest acceptable operation, backups with stop-and-go traffic will result in unacceptable eastbound operation during the PM peak period at least to the east of the Bailey Road interchange.

As stated in the *East County Action Plan*, freeway operation is evaluated based upon Traffic Service Objective (TSO) criteria which compare travel times during peak commute conditions versus those during free flow conditions. The Delay Index is one of those TSOs and compares the time required to drive a segment of road during the peak hour with the time to drive that same during uncongested free-flow conditions. The Delay Index TSO for regionally significant routes is 2.5 for the SR4 freeway, and 2.0 for suburban routes such as Bailey Road.

Future Base Case (Without Project) Traffic Conditions

Horizon Years Evaluated and Traffic Projection Methodology

Weekday AM and PM peak hour traffic projections have been developed for year 2005 and 2010 horizons. Year 2010 projections were developed using the East County Traffic Model.

Table 4-4.2 shows the development assumptions that were used in the traffic forecasting process for the Years 2005, 2010, and 2025. Year 2005 projections were developed manually using trip generation rates from the Institute of Transportation Engineers and distribution patterns reflective of output from the East County Traffic Model. Year 2005 background conditions assumed development of a list of approved and probable projects supplied by the City of Pittsburg. However, only one-third of the San Marco and Alves developments were assumed completed by this horizon. For the 2010 analysis horizon, approximately two-thirds of the San Marco and Alves residential units and all of the Alves office and retail development were assumed to be completed.

Table 4.4-2
Background Development Assumptions (2005, 2010, 2025)

Project	2005	2010	2025
San Marco SFR (Single Family)	454 Units	908 Units	1412 Units
San Marco (Apartments)	227 Units	887 Units	1526 Units
San Marco Elem School (K-5)	-----	807 students	807 students
Alves Single-family	134 Units	-----	560 Units
Apartments	182 Units	-----	540 Units
Townhouses	53 Units	102 Units	150 Units
Alves Office, light industrial, retail	-----	150,000 sq ft	700,000 sq ft
Alves K-8 school on-site	-----	800 students	800 students
BART Specific Plan Developments			
Multi-family units	-----	1,390 Units	1,390 Units
Commercial, office, light industrial	-----	------	1,850,000 sq ft
Brickyard/Americana SFR	193 Units	193 Units	193 Units
Oak Hills SFR (Portion approved, but not yet completed)	216 Units	216 Units	216 Units
Marina Walk SFR	120 Units	120 Units	120 Units
Los Medanos (Industrial)	11,800 sq ft	11,800 sq ft	11,800 sq ft
Praxair (Industrial)	18.9 acres	18.9 acres	18.9 acres
Bailey Estates *(The Project)*	-----	319 Units	319 Units
Ridge Farms	-----	144 Units	243 Units

Note: This Project Source List is a combination of Alves Administrative Draft EIR, BART Station Specific Plan EIR, the City of Pittsburg Planning Division, and estimates by Abrams Associates.

Roadway Improvements Assumed Completed by 2005 and 2010

Year 2005

The horizon year 2005 analysis in this study assumed the following roadway improvements:

- Widening of the SR4 freeway to 8 lanes (3 mix flow lanes and 1 HOV lane each direction) to the Railroad Avenue interchange in Pittsburg. This construction is now almost complete.
- Extension of West Leland Road westerly to a connection with San Marco Boulevard, but not to Willow Pass Road in Concord.
- Extension of San Marco Boulevard south of the Bay Point interchange to a connection with West Leland Road, but not to Bailey Road.
- No widening of Bailey Road from 2 to 4 lanes between Concord and Pittsburg.

Year 2010

The horizon year 2010 analysis in this study assumed the following roadway improvements:

- No widening of Bailey Road from 2 to 4 lanes between Concord and Pittsburg.
- Extension of San Marco Boulevard south of the Bay Point interchange to a connection with West Leland Road.
- Extension of West Leland Road westerly to a connection with San Marco Boulevard, but not to Willow Pass Road in Concord.
- Widening of the SR4 freeway to 8 lanes (3 mix flow lanes and 1 HOV lane each direction) to just east of the Somersville Road interchange in Pittsburg.

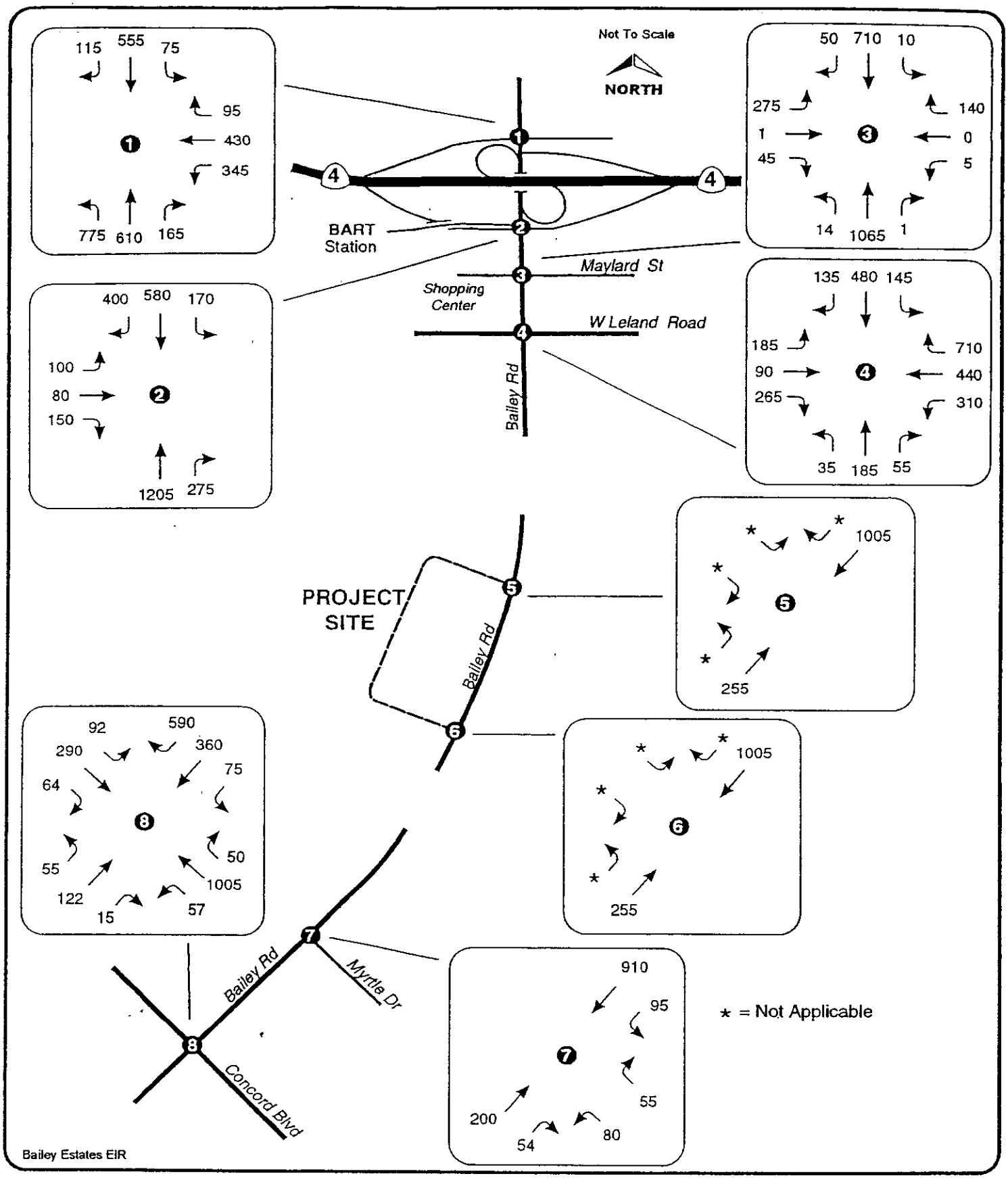
Base Case Volumes

Figures 4.4-5 and 4.4-6 present year 2005 Base Case (without project) AM and PM peak hour volumes, respectively, while Figures 4.4-7 and 4.4-8 present year 2010 Base Case (without project) AM and PM peak hour volumes, respectively.

Base Case Intersection and Freeway Operation

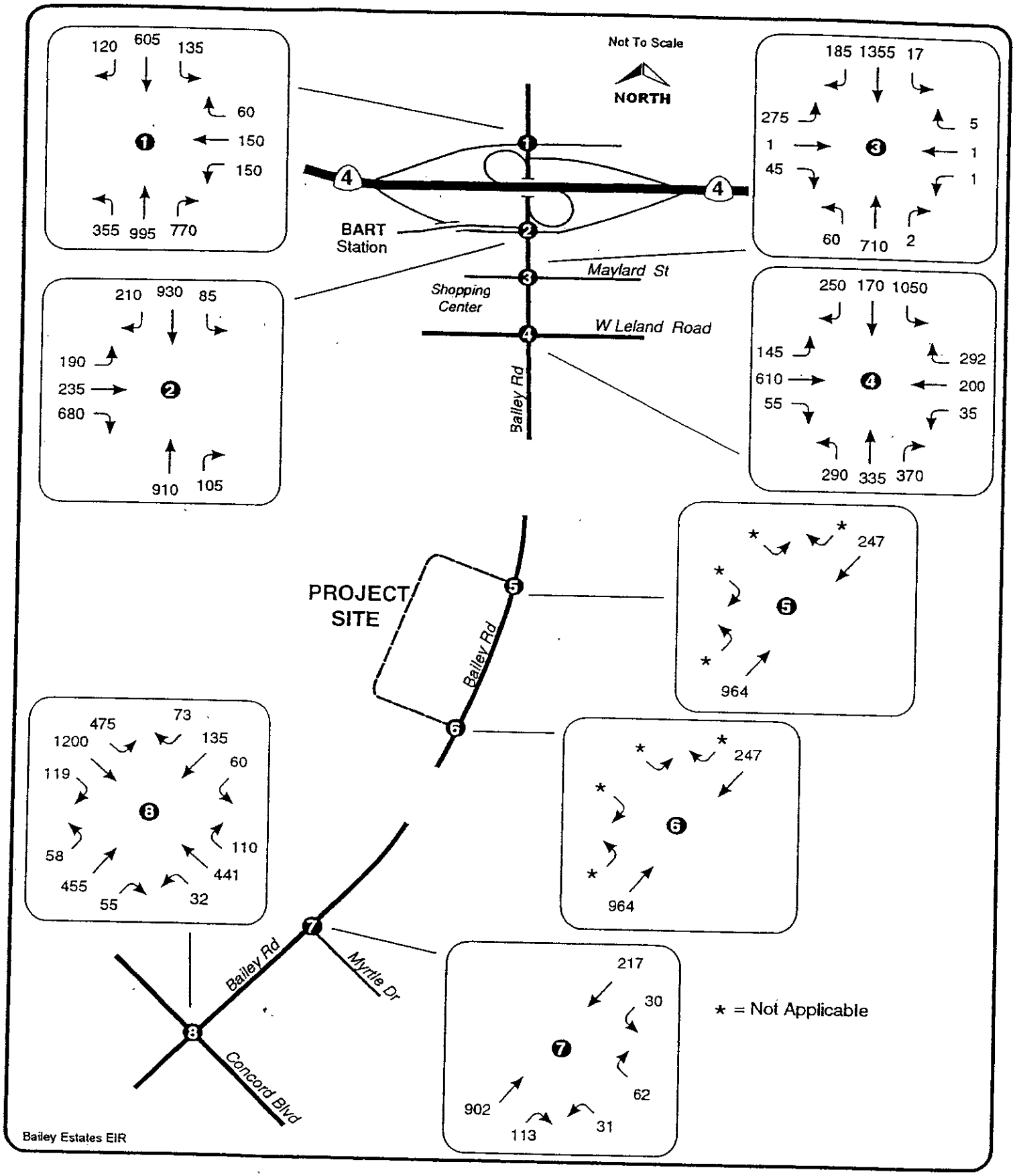
Near Term

Tables 4.4-3 and 4.4-4 show that the Base Case (without project) traffic levels in the year 2005 operation would experience unacceptable conditions at the Bailey Road/Myrtle Drive intersection in Concord during the AM peak hour and at the Bailey Road/Concord Boulevard intersection during the PM peak hour. AM peak hour volumes at the Bailey Road/Myrtle Drive intersection would meet peak hour signal warrant criteria levels. All intersections analyzed along Bailey Road in Pittsburg would maintain acceptable operation.



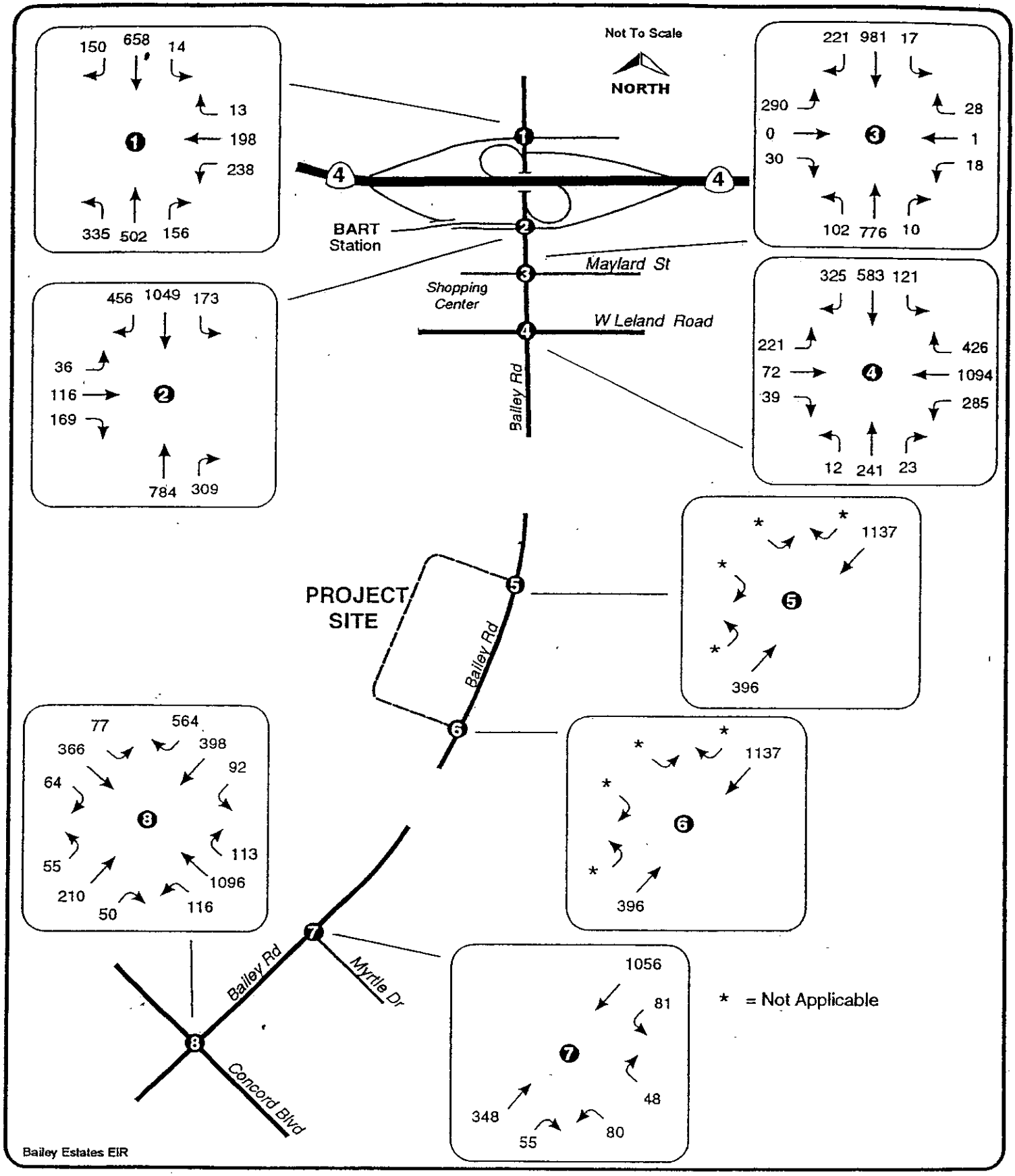
Source: Crane Transportation Group

Figure 4.4-5 Year 2005 Base Case (Without Project) AM Peak Hour



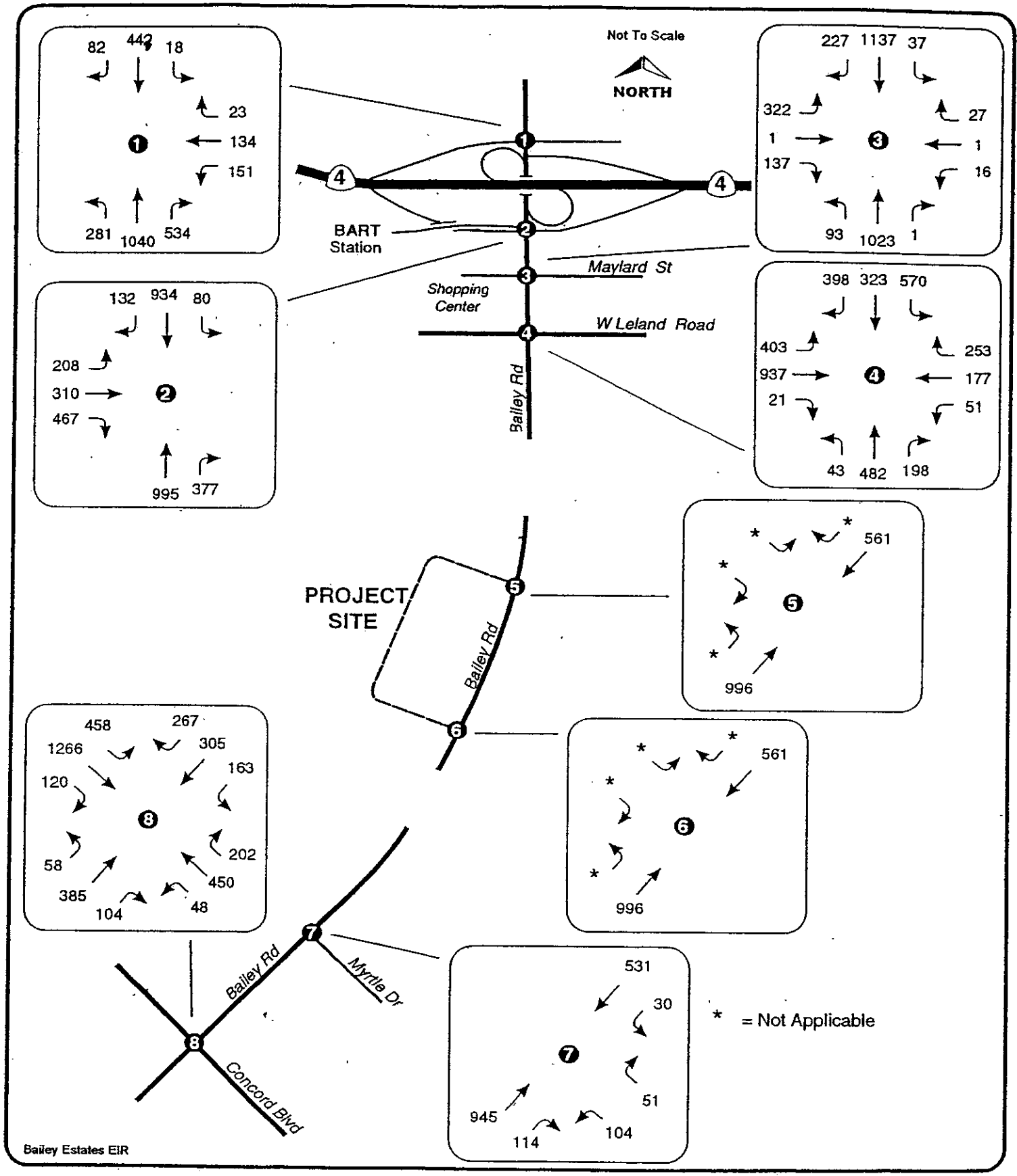
Source: Crane Transportation Group

Figure 4.4-6 Year 2005 Base Case (Without Project) PM Peak Hour



Source: Crane Transportation Group

Figure 4.4-7 Year 2010 Base Case AM Peak Hour



Source: Crane Transportation Group

Figure 4.4-8 Year 2010 Base Case PM Peak Hour

Table 4.4-3
2005 and 2010 INTERSECTION LEVELS OF SERVICE (AM PEAK HOUR)

		Near-Term (2005)			Year 2010		
Intersection	**Existing**	**Base Case (w/o Project)**	**Base Case + Project**	**Base Case + Project with Mitigations**	**Base Case (w/o Project)**	**Base Case + Project**	**Base Case +Project with Mitigations**
Bailey Rd./SR4 WB On-Ramp and Canal Rd. (Traffic signal)	D-0.88	C-0.78	C-0.79	----	A-0.50	A-0.51	----
Bailey Rd./SR4 EB Ramps and BART Station Access (Traffic signal)	B-0.62	A-0.49	A-0.51	----	A-0.40	A-0.41	----
Bailey Rd./Maylard St. and Shopping Center Entrance (Traffic signal)	A-0.59	A-0.51	A-0.53	----	A-0.43	A-0.43	----
Bailey Rd./West Leland Rd. (Traffic signal)	D-0.87[1]	D-0.81	D-0.83	----	D-0.83	D-0.84	----
Bailey Rd./North Project Access Intersection (Stop sign control)	NA	NA	E-40.3	C-22.2	NA	F-72.3	D-27.1
Bailey Rd./South Project Access Intersection (Stop sign control)	NA	NA	E-40.5	C-22.3	NA	F-72.9	D-27.3
Bailey Rd./Myrtle Drive (Concord) (Stop Sign/Mitigation = Traffic Signal)	D-26.2 [2]	F-52.3	F-78.3	B-0.61	F-147 sec	F-187 sec	B-0.69
Bailey Rd./Concord Blvd. (Concord) (Traffic signal)	B-0.68[1]	C-0.79	D-0.83[1]	C-0.80	D-0.87[1]	E-0.92[1]	C-0.74

[1] Signalized level of service - volume to capacity ratio.

[2] Unsignalized level of service–average vehicle delay in seconds. Myrtle Drive stop sign controlled approach.

NA = Not applicable.

Signalized Analysis Methodology: Contra Costa County Transportation Authority.

Unsignalized Methodology: 1997 Highway Capacity Manual.

Source: Crane Transportation Group, April 2001; Abrams Associates, July 2003.

Table 4.4-4
2005 and 2010 INTERSECTION LEVELS OF SERVICE (PM PEAK HOUR)

		Near-Term (2005)			Year 2010		
Intersection	**Existing**	**Base Case (w/o Project)**	**Base Case + Project**	**Base Case + Project with Mitigations**	**Base Case (w/o Project)**	**Base Case + Project**	**Base Case +Project with Mitigations**
Bailey Rd./SR4 WB On-Ramp and Canal Rd. (Traffic signal)	B-0.66[1]	B-0.66	B-0.66	----	A-0.43	A-0.43	----
Bailey Rd./SR4 EB Ramps and BART Station Access (Traffic signal)	D-0.81[1]	D-0.81	D-0.81	----	A-0.59	A-0.60	----
Bailey Rd./Maylard St. and Shopping Center Entrance (Traffic signal)	A-0.49[1]	A-0.49	A-0.49	----	A-0.50	A-0.52	----
Bailey Rd./West Leland Rd. (Traffic signal)	C-0.77[1]	D-0.81	D-0.83	----	C-0.72	C-0.74	----
Bailey Rd./North Project Access Intersection (Stop sign control)	NA	NA	E-40.3	C-22.5	NA	F-72.3	D-27.0
Bailey Rd./South Project Access Intersection (Stop sign control)	NA	NA	E-40.5	C-22.3	NA	F-72.9	D-29.6
Bailey Rd./Myrtle Drive (Concord) (Stop Sign/ Mitigation = Traffic Signal	C-16.9[2]	F-52.3	F-78.3	B-0.66	F-114	F-180	B-0.72
Bailey Rd./Concord Blvd. (Concord) (Traffic signal)	C-0.73[1]	E-0.92[1]	E-0.92[1]	D-0.81	D-0.87[1]	D-0.87[1]	C-0.79

[1] Signalized level of service - volume to capacity ratio.

[2] Unsignalized level of service–average vehicle delay in seconds. Myrtle Drive stop sign controlled approach.

NA = Not applicable.

Signalized Analysis Methodology: Contra Costa County Transportation Authority.

Unsignalized Methodology: 1997 Highway Capacity Manual.

Source: Crane Transportation Group, April 2001; Abrams Associates, July 2003.

Appendix C Tables C-5 and C-6 show that the SR4 freeway would experience acceptable year 2005 Base Case (without project) operation in both directions between the Railroad Avenue and Bay Point interchanges during both the AM and PM peak traffic hours based upon projected volumes and available capacities. However, it is very likely that during the PM peak hour eastbound freeway traffic will back up from the Railroad Avenue interchange (where the eastbound travel lanes merge to two lanes) back to and through the Bailey Road interchange.

Year 2010

Tables 4.4-3 and 4.4-4 show that with Base Case (without project) traffic levels, unacceptable year 2010 operation would be expected at the Bailey Road/Concord Boulevard and Bailey Road/Myrtle Drive intersections in Concord during both the AM and PM peak traffic hours. Both AM and PM peak hour volumes at the Bailey Road/Myrtle Drive intersection would exceed peak hour signal warrant criteria levels. All intersections analyzed along Bailey Road in Pittsburg would maintain acceptable operation.

Appendix C Tables C-7 and C-8 show that the SR4 freeway would experience acceptable year 2010 Base Case (without project) operation in both directions between the Railroad Avenue and Bay Point interchanges during the AM and PM peak traffic hours.

Recommended Base Case Improvements

Year 2005 (see Tables 4.4-3 and 4.4-4)

Bailey Road/Myrtle Drive Intersection

- Signalize and add an exclusive left-turn lane to the southbound Bailey Road intersection approach.

  Resultant Signalized Intersection Operation
  AM Peak Hour – LOS B = .61 Volume/Capacity Ratio
  PM Peak Hour – LOS B = .66 Volume/Capacity Ratio

- Alternatively, provide an exclusive left-turn lane on the southbound Bailey Road intersection approach, a refuge area in the median of Bailey Road for vehicles turning left from Myrtle Drive and a left-turn lane on the Myrtle Drive intersection approach.

  Resultant Operation of the Left Turn Movement from Myrtle Drive
  *AM Peak Hour – LOS D = 30.1 seconds average vehicle delay**
  PM Peak Hour – LOS C = 19.8 seconds average vehicle delay

Bailey Road/Concord Boulevard Intersection

- Add an exclusive left-turn lane to the southbound Bailey Road intersection approach.

  Resultant Operation
  AM Peak Hour – LOS C = .80 Volume/Capacity Ratio
  PM Peak Hour – LOS D = .88 Volume/Capacity Ratio

Year 2010 (see Tables 4.4-3 and 4.4-4)

Bailey Road/Myrtle Drive Intersection

- Signalize and add an exclusive left-turn lane to the southbound Bailey Road intersection approach.

  Resultant Operation
  AM Peak Hour – LOS B = .69 Volume/Capacity Ratio
  PM Peak Hour – LOS C = .72 Volume/Capacity Ratio

Bailey Road/Concord Boulevard Intersection

- Add exclusive left-turn lanes to both the north- and southbound Bailey Road intersection approaches.

  Resultant Operation
  AM Peak Hour – LOS C = .74 Volume/Capacity Ratio
  PM Peak Hour – LOS D = .87 Volume/Capacity Ratio

Impacts and Mitigation Measures

Significance Criteria

City of Pittsburg

Based primarily on the adopted policies listed in the most recently adjusted East County Action Plan, the project would be considered in this EIR to create a significant impact on transportation facilities if it would:

- Cause operation of a signalized intersection along Bailey Road to decline from LOS E (V/C = .99) to LOS F (V/C ≥ 1.00);
- Cause operation of movements or approaches at an unsignalized intersection to decline from LOS E to LOS F;
- Increase volumes at an unsignalized intersection above peak hour signal warrant criteria levels;

- Increase peak hour traffic volumes by one percent or more at intersections already operating at an unacceptable level of service or to a freeway segment with inadequate capacity to meet future cumulative demand;
- Result in projected on-site parking demand that would exceed the proposed on-site parking supply on a regular and frequent basis;
- Result in potential safety conflicts for pedestrians or bicyclists, or fail to provide adequate bicycle and pedestrian access; or
- Increase transit demand above the service levels or the capacity of transit vehicles and auxiliary facilities currently provided or planned by local transit operators or agencies.

City of Concord

- Cause operation of a signalized intersection along Bailey Road to decline from LOS D (V/C = .89) to LOS E or poorer (V/C ≥ .90);
- Cause operation of movements or approaches at an unsignalized intersection to decline from LOS D to LOS E or poorer;
- Increase volumes at an unsignalized intersection above peak hour signal warrant criteria levels;
- Increase peak hour traffic volumes by 1 percent or more at intersections already operating at an unacceptable level of service or at an unsignalized intersection where volumes are already exceeding peak hour signal warrant criteria levels.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Trip Generation and Distribution

Table 4.4-5 shows that the project would generate 3,050 daily two-way trips, with about 315 of these trips in the PM peak hour. The project traffic would be split between two access points, and would be distributed approximately 60 percent to the north and 40 percent to the south on Bailey Road. With the addition of this new traffic, Bailey Road would continue to operate as a two-lane roadway at an acceptable Level of Service for both the 2005 and 2010 traffic conditions. This is consistent with both the Pittsburg and Concord General Plans, which assume that Bailey Road will continue to be a two-lane roadway between Myrtle Drive in Concord and Leland Road in Pittsburg. With the exceptions of improvements at the project frontage, there would be no further mitigations to Bailey Road itself that would be required as a result of the project. Tables 4.4-3 and 4.4-4 show the LOS results for the Bailey Road intersections with the addition of this project traffic.

Table 4.4-5
PROJECT TRIP GENERATION

PROJECT	SIZE	DAILY 2-WAY TRIPS (INBOUND + OUTBOUND)		AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
				INBOUND		OUTBOUND		INBOUND		OUTBOUND	
		RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL
Single Family Residential	319 Units	9.57	3,054	0.19	61	0.56	179	0.65	207	0.36	115

Trip Rate Source: Trip Generation 6th Edition by the Institute of Transportation Engineers, 1997.

Compiled by Crane Transportation Group, April 2001.

PROJECT TRAFFIC DISTRIBUTION

DIRECTION	AM PEAK HOUR*		PM PEAK HOUR*	
	INBOUND TO SITE	OUTBOUND FROM SITE	INBOUND TO SITE	OUTBOUND FROM SITE
Bailey Road North of Project (North of North Project Access)	63%	49%	57%	68%
Bailey Road South of Project (South of South Project Access)	37%	51%	43%	32%

* For year 2010 conditions, some traffic destined to/from the north will use the new San Marco Boulevard connection to Bailey Road just south of the project. This connection would be expected to attract 11 to 12 percent of total project traffic distribution.

Sources: *East County Traffic Model*; Crane Transportation Group, April 2001.

The year 2025 traffic projections for Bailey Road (CCTA regional traffic model) forecast average daily trips (ADT) of about 12,500 vehicles per day. This is consistent with the planned design for Bailey Road of one through lane in each direction. Based on these projections and with the addition of project traffic, the existing roadway does not need to be widened to four lanes. As a general rule, a two-lane roadway can accommodate up to 15,000 vehicles per day at a Level of Service C operation, as long as there are limited driveways and side streets.

Resultant distribution of project AM and PM peak hour traffic to the local roadway network is presented in Figures 4.4-9 and 4.4-10 for year 2005 conditions and in Figures 4.4-11 and 4.4-12 for year 2010 conditions. By 2025 the City of Pittsburg anticipates that San Marco Boulevard will be extended to connect to Bailey Road. This will result in redistribution of some project traffic to the San Marco Boulevard corridor and away from the Bailey Road corridor (to the north).

Planned Frontage Improvements

As a part of the proposed development, it is planned that the project frontage on Bailey Road will be improved with landscaping and a pathway. An additional lane will be added on Bailey Road for acceleration and deceleration to the project. A northbound left turn lane will be added to Bailey Road at the project entrances. It is anticipated that right-of-way dedications will be sufficient to accommodate a wider road in the future should this ever become necessary.

Project Impacts for Near Term Horizon (Year 2005)

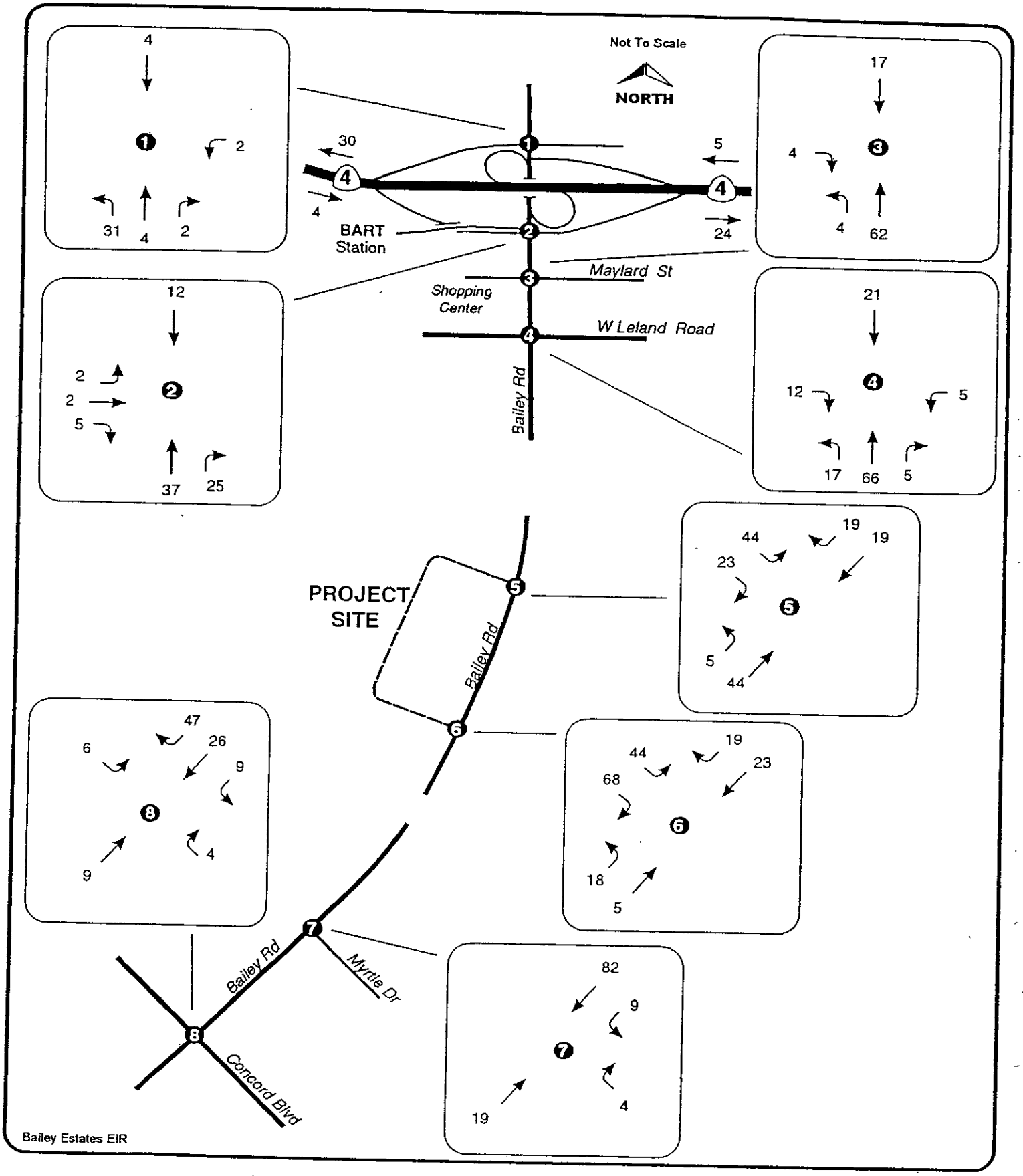
Intersection Operation (Level of Service and Signal Warrants)

City of Pittsburg

Tables 4.4-3 and 4.4-4 present resultant near term horizon operating conditions at all analyzed intersections along the Bailey Road corridor. As shown, all existing intersections along Bailey Road in Pittsburg (north of the site) would operate at acceptable levels of service after the addition of project traffic during both the AM and PM peak traffic hours. In addition, both project access intersections with Bailey Road would operate at acceptable levels of service during both commute peak traffic hours. Neither access intersection would have volumes meeting urban peak hour signal warrant criteria levels.

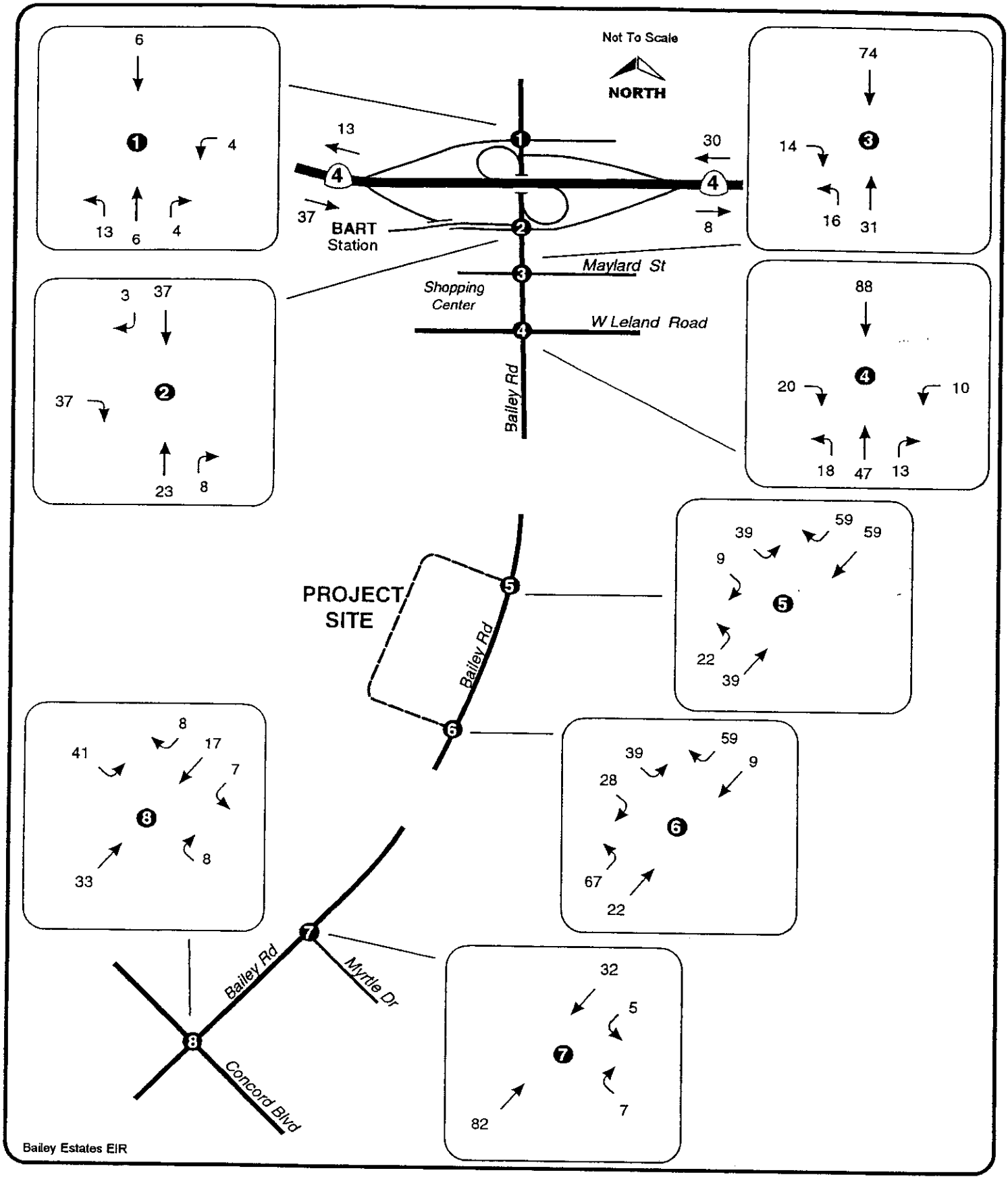
City of Concord

IMPACT 4.4-1: Project-generated traffic would result in significant adverse impacts to intersection operation at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections.



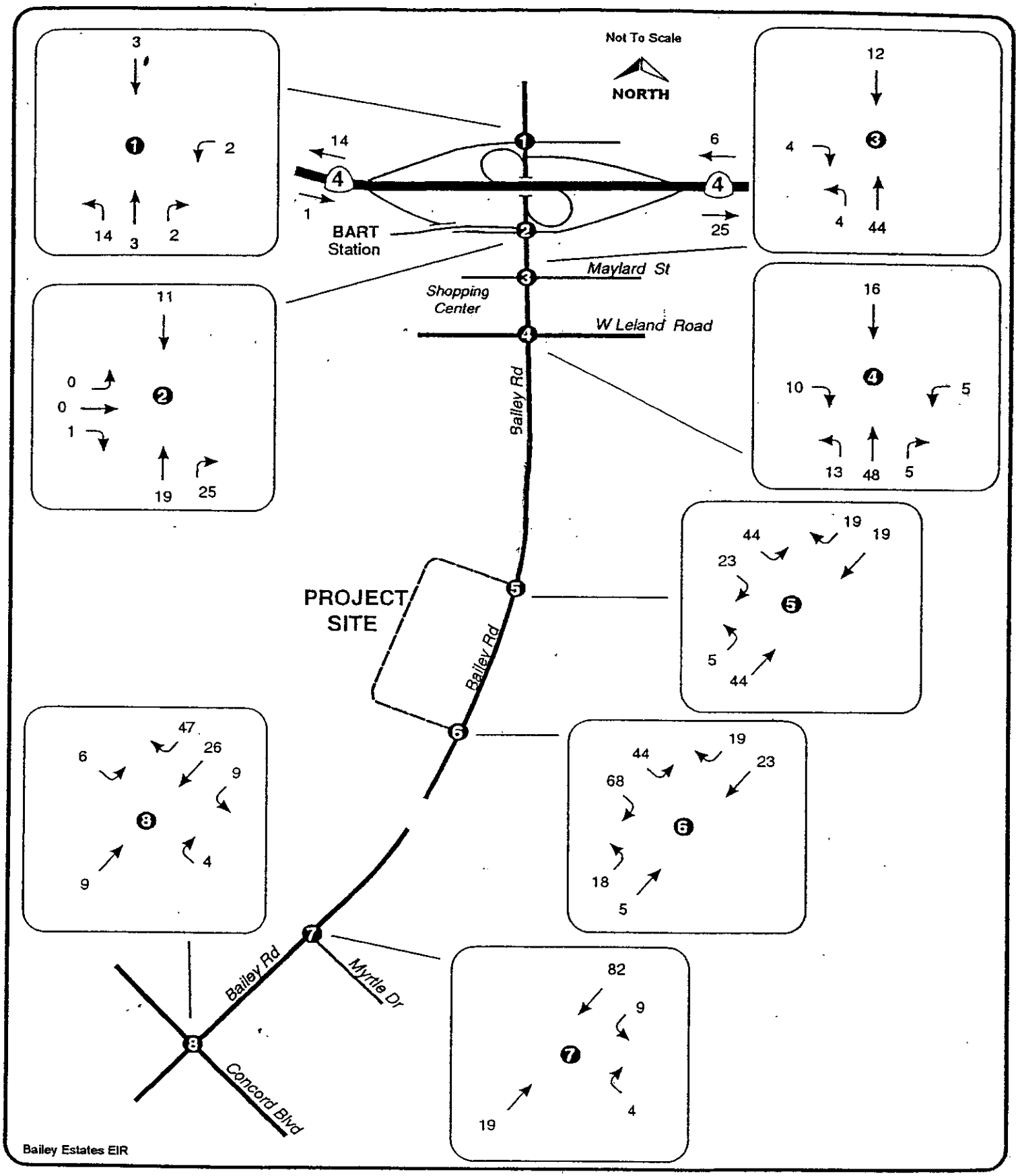
Source: Crane Transportation Group

Figure 4.4-9 Year 2005 Project Increment AM Peak Hour



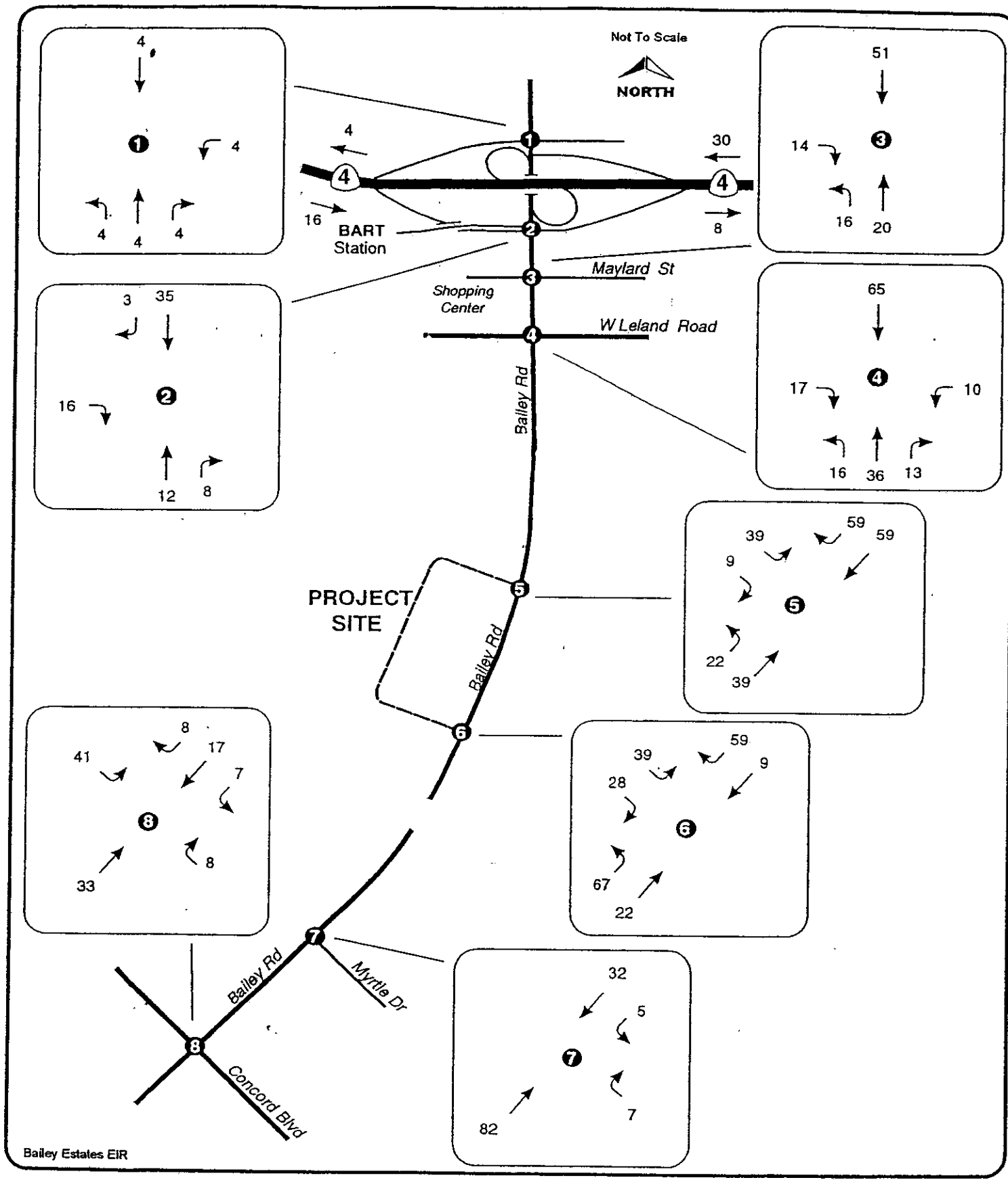
Source: Crane Transportation Group

Figure 4.4-10 Year 2005 Project Increment PM Peak Hour



Source: Crane Transportation Group

Figure 4.4-11 Year 2010 Project Increment AM Peak Hour



Source: Crane Transportation Group

Figure 4.4-12 Year 2010 Project Increment PM Peak Hour

During the AM peak hours project traffic would increase volumes by more than one percent at the Bailey Road/Myrtle Drive intersection where Base Case operation would already be an unacceptable LOS F and where Base Case volumes would already meet signal warrant criteria levels. During the PM peak hour, project traffic would change operation of the stop sign controlled approach at the Bailey Road/Myrtle Drive intersection from an acceptable LOS D to an unacceptable LOS E and would also increase volumes to meet peak hour signal warrant criteria levels. During the same time period, project traffic would increase volumes by more than one percent at the Bailey Road/Concord Boulevard intersection where Base Case operation would already be an unacceptable LOS E.

All of the following mitigation measures are required to reduce the impacts of project-generated traffic at these two intersections to less-than-significant levels.

❑ **MITIGATION MEASURE 4.4-1A:** Intersection improvements at Bailey Road/Myrtle Drive are to consist of intersection signalization and construction of an exclusive left-turn lane on the intersection's southbound Bailey Road approach. Both improvements are also needed to provide acceptable Base Case operation.

Resultant Signalized Intersection Operation (see Tables 4.4-3 and 4.4-4):
AM Peak Hour – LOS B = .66 Volume/Capacity Ratio
PM Peak Hour – LOS C = .72 Volume/Capacity Ratio

The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Myrtle Drive intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.

❑ **MITIGATION MEASURE 4.4-1B:** Intersection improvements at Bailey Road/Concord Boulevard are to consist of a left-turn lane on the northbound Bailey Road intersection approach and a left-turn lane on the southbound Bailey Road intersection approach. These improvements are needed to provide acceptable Base Case operation.

Resultant Operation (see Tables 4.4-3 and 4.4-4):
AM Peak Hour – LOS C = .75 Volume/Capacity Ratio
PM Peak Hour – LOS D = .85 Volume/Capacity Ratio

The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note

that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.

Freeway Operation

Appendix C Tables C-5 and C-6 present resultant Year 2005 operating conditions for the SR4 freeway near the Bailey Road interchange. The SR4 freeway just east and west of the Bailey Road interchange should be operating at acceptable levels of service in both directions during both commute periods by 2005, with or without project traffic. It should be noted, however, that it is probable that during the PM peak hour eastbound freeway traffic may back up to and past the Bailey Road interchange from the new four- to two-lane merge area in the vicinity of the Railroad Avenue interchange. The project would have a negligible impact on this backup, adding at most eight vehicles to eastbound freeway traffic east of the Bailey Road interchange during the PM peak hour.

Project Impacts for Year 2010

Intersection Operation (Level of Service and Signal Warrants)

IMPACT 4.4-2: Project-generated traffic would result in significant adverse impacts to intersection operation at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections in Concord as well as at the south project access road connection to Bailey Road.

Tables 4.4-3 and 4.4-4 present resultant year 2010 operating conditions at all analyzed intersections along the Bailey Road corridor. During the AM peak hours project traffic would increase volumes by more than one percent at the Bailey Road/Myrtle Drive intersection where Base Case operation would already be an unacceptable LOS F and where volumes would already meet signal warrant criteria levels. Project traffic would also change operation at the Bailey Road/Concord Boulevard intersection from LOS D to LOS E operation. During the PM peak hour, project traffic would increase volumes by more than one percent at the Bailey Road/Myrtle Drive intersection where Base Case operation would already be an unacceptable LOS F and where volumes would already meet signal warrant criteria levels. During the same time period, project traffic would increase volumes by more than one percent at the Bailey Road/Concord Boulevard intersection where Base Case operation would already be an unacceptable LOS F. Both project access intersections would be operating at acceptable levels of service and neither would have volumes exceeding urban peak hour signal warrant criteria levels.

Left-turn movements from both project access road connections to Bailey Road (Streets N and O) would be operating at acceptable LOS D conditions during both the AM and PM peak traffic hours. The applicant is proposing refuge areas in the Bailey Road median for left turns from both project

access roads, which would provide the acceptable levels of service. However, by 2010, Base Case + Project AM peak hour volumes would be exceeding peak hour signal warrant criteria levels at the project's southerly access road (Street N) connection to Bailey Road. The Pittsburg General Plan[5] transportation section indicates that traffic signals should be provided, where warranted, along major arterial roadways such as Bailey Road.

All of the following mitigation measures are required to reduce this impact to a less-than-significant level.

- **MITIGATION MEASURE 4.4-2A:** Intersection improvements at the Bailey Road/Myrtle Drive intersection consist of intersection signalization and construction of an exclusive left-turn lane on the intersection's southbound Bailey Road approach.

  Resultant Operation (see Tables 4.4-3 and 4.4-4):
  AM Peak Hour – LOS C = .74 Volume/Capacity Ratio
  PM Peak Hour – LOS C = .78 Volume/Capacity Ratio

  The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Myrtle Drive intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.

- **MITIGATION MEASURE 4.4-2B:** Intersection improvements at Bailey Road/Concord Boulevard are to consist of an exclusive right-turn lane on the northbound Bailey Road at the intersection approach.

  Resultant Operation (see Tables 4.4-3 and 4.4-4):
  AM Peak Hour – LOS D = .81 Volume/Capacity Ratio
  PM Peak Hour – LOS C = .80 Volume/Capacity Ratio

  The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.

❑ **MITIGATION MEASURE 4.4-2C:** The applicant/developer shall signalize the southern project access intersections with Bailey Road.

Resultant Operation of the Southern Project Access Intersection (see Tables 4.4-3 and 4.4-4):

Signalized Operation of South Intersection
AM Peak Hour – LOS C = .72 volume/capacity ratio
PM Peak Hour – LOS B = .68 volume/capacity ratio

Resultant Unsignalized Operation of North Access Intersection (Stop-Controlled Left Turn to Bailey Road)
AM Peak Hour – LOS C = 24.4 seconds average vehicle delay
PM Peak Hour – LOS C = 24.8 seconds average vehicle delay

Freeway Operation

Appendix C Tables C-7 and C-8 present resultant year 2010 operating conditions for the SR4 freeway near the Bailey Road interchange. The SR4 freeway just east and west of the Bailey Road interchange should be operating at acceptable levels of service in both directions during both commute periods by 2010, with or without project traffic.

Cumulative Traffic Conditions (Year 2025)

The *East County Action Plan for Routes of Regional Significance* sets forth Traffic Service Objectives (TSOs) for the significant routes in the East County region. The Delay Index is one of those TSOs, and compares the time required to drive a segment of road during peak-hour congested conditions with the time to drive that same segment during uncongested conditions. The Original Draft EIR for the Bailey Estates project did not address Delay Index calculations.

Updated traffic forecasts prepared by Abrams Associates assess cumulative traffic impacts of the Bailey Estates project. These 2025 cumulative traffic forecasts have been based on the assumptions described below.

Roadway Network Assumptions (2025)

In 2025, Bailey Road will continue to be a two-lane roadway between Leland Road in Pittsburg and Myrtle Drive in Concord. San Marco Boulevard is extended to intersect Bailey Road north of the Bailey Estates project. Traffic volume forecasts show that the San Marco Boulevard extension will be two lanes in width. Within developed areas (such as Bailey Estates), the road may be wider to accommodate additional turn lanes at intersections and to provide room for future off-street bicycle and pedestrian pathways.

It is planned that Leland Road will be connected from Bailey Road to San Marco Boulevard, and that a further extension of Leland Road from San Marco Boulevard to Willow Pass Road in Concord is completed. For the purposes of the capacity studies, it is assumed that the current lane configurations will remain at the two intersections in Concord.

Land Use Assumptions (2025)

The 2025 traffic models assume the buildout of the projects listed in Table 4.4-2. Within the City of Concord, no major land use changes are anticipated for the Bailey Road corridor, but based on regional traffic models, there will be an increase in background peak hour through traffic volumes on Bailey Road.

Project-related trip generation and distribution is as previously described in the subsection titled "Trip Generation and Distribution."

Roadway Capacity Impacts (2025)

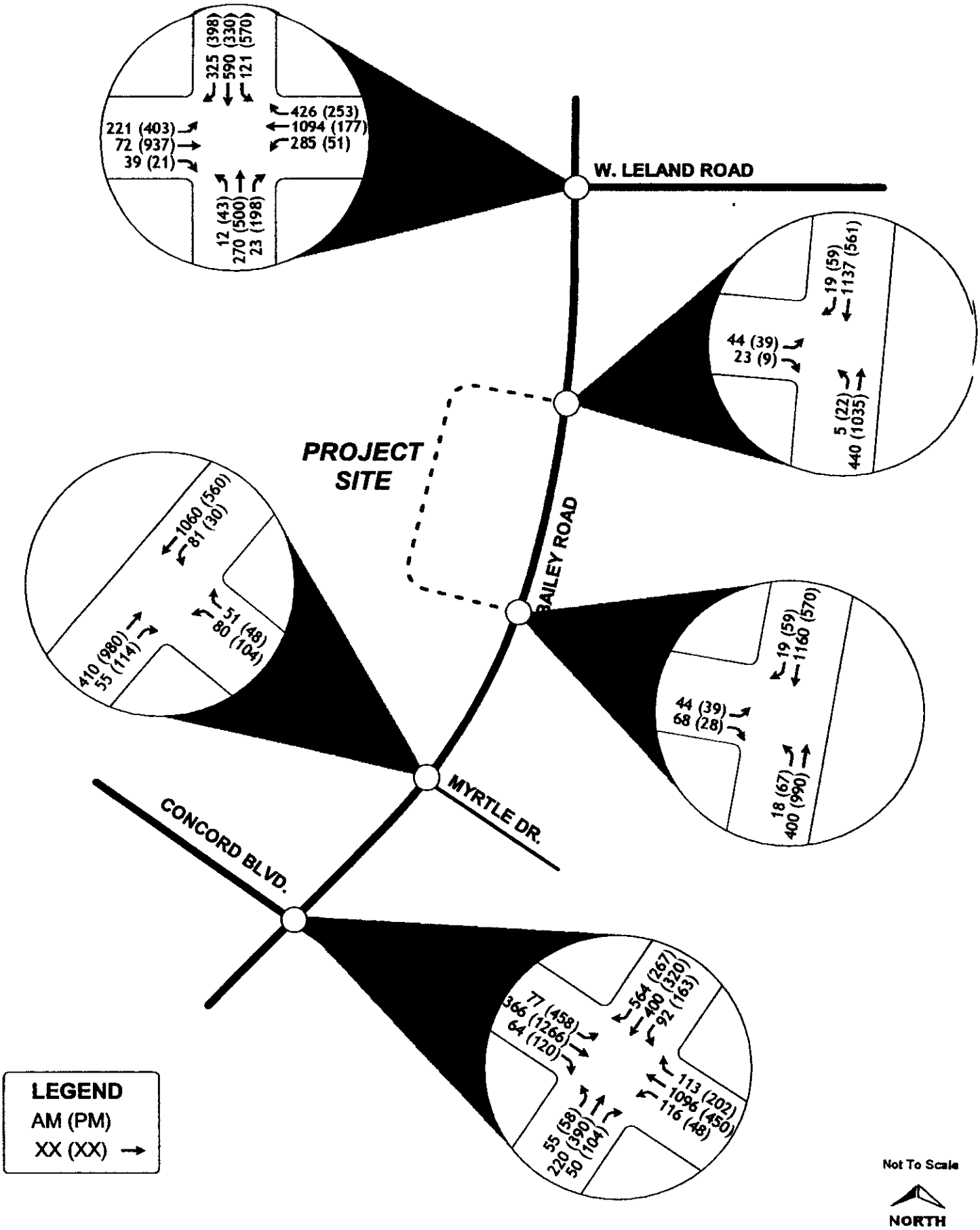
Based on these assumptions, the AM and PM peak hour traffic volumes have been estimated for the intersections on Bailey Road between Leland Road in Pittsburg and Concord Boulevard in Concord. These 2025 forecasts (including the project) are shown in Figure 4.4-13. Table 4.4-6 shows the resulting Level of Service and volume-to-capacity ratio conditions for these intersections.

IMPACT 4.4-3: Project-generated traffic would contribute to significant adverse impacts on Bailey Road between SR4 and Leland Road, a Route of Regional Significance.

The Delay Index TSO is 2.5 for the SR4 freeway and 2.0 for Bailey Road. Tables 4.4-7 and 4.4-8 provide the Delay Index calculations for the relevant routes in the study area for AM and PM peak hours, respectively.

Based on existing data, all study routes currently meet their TSO. Under the 2025 No Project conditions, westbound SR4 west of Bailey Road during the AM peak hour, and eastbound SR4 both east and west of Bailey Road during the PM peak hour, would exceed the TSO. The addition of traffic from the proposed project would not cause a substantial change in the delay index on the SR4 freeway.

Under 2025 No Project conditions, southbound Bailey Road between SR4 and Leland Road is projected to exceed the TSO during the PM peak hour. Traffic from the proposed project causes a further reduction in the speed on this roadway and increases the delay index from 2.08 to 2.50. This represents a significant impact.



Source: Abrams Associates

Figure 4.4-13 Year 2025 AM (PM) Traffic Volume Forecast

Table 4.4-6
Intersection Level of Service
Year 2025 Roadway Capacities with Mitigations AM and PM Peak Hours

Intersection	AM Peak Hour		PM Peak Hour	
	2025 (w/o Project)	2025 + Project	2025 (w/o Project)	2025 + Project
Bailey Rd./SR4 WB On-Ramp and Canal Rd. (Traffic signal)	F-1.31	F-1.32	D-0.81	D-0.81
Bailey Rd./SR4 EB Ramps and BART Station Access (Traffic signal)	C-0.73	C-0.73	E-1.00	E-1.01
Bailey Rd./Maylard St. and Shopping Center Entrance (Traffic signal)	C-0.73	C-0.75	C-0.80	C-0.81
Bailey Rd./West Leland Rd. (Traffic signal)	F-1.27	F-1.28	F-1.16	F-1.17
Bailey Rd./North Project Access Intersection (Stop sign control)	E->45/ C-16.3[1]	E->45.0/ C-18.2	E-40.3/ C-20.3[1]	E-40.3/ C-20.3[1]
Bailey Rd./South Project Access Intersection (Stop sign control)	C-0.71	C-0.75	C-0.73	C-0.78
Bailey Rd./Myrtle Drive (Concord) (Stop Sign/Mitigation = Traffic Signal)	C-0.75	C-0.76	D-0.88	D-0.88
Bailey Rd./Concord Blvd. (Concord) (Traffic signal)	D-0.88[2]	D-0.88[2]	D-0.87[2]	E-0.92[2]

(1) Unsignalized level of service–average vehicle delay in seconds. Project access road stop sign controlled left turn/right turn.
(2) Signalized level of service–volume to capacity ratio.
NA = Not applicable.
Signalized Analysis Methodology: Contra Costa County Transportation Authority.
Unsignalized Analysis Methodology: 1997 Highway Capacity Manual.
Source: Abrams Associates, June 2003.

Table 4.4-7
DELAY INDEX SUMMARY
AM PEAK HOUR

Roadway Segment	Direction	TSO[1]	Free-Flow Speed[2]	Existing Conditions[3]		2025 No Project Conditions		2025 With Project Conditions	
				Speed	Delay Index	Speed[4]	Delay Index	Speed[4]	Delay Index
SR 4 – West of Bailey Rd.	WB[5]	3.0	65	38	1.68	16	4.06	16	4.06
SR 4 –East of Bailey Rd.	WB[5]	3.0	65	38	1.68	24	2.71	24	2.71
Bailey Rd – Between SR 4 and Leland Rd.	NB	2.0	25	20	1.26	20	1.26	19	1.31
	SB	2.0	25	17	1.45	15	1.67	15	1.67

Notes:
1. Traffic Service Objective as presented in the *East County Action Plan for Routes of Regional Significance.*
2. Free-flow speed as presented in *East County Action Plan for Routes of Regional Significance.*
3. Existing speed and delay index as presented in the 1999 *Contra Costa Transportation Authority TSO Monitoring Report.*
4. 2025 speed estimation based on the East County Travel Demand Model.
5. Data for mixed-flow lanes only.

Source: Fehr & Peers Associates, September 2002.

Table 4.4-8
DELAY INDEX SUMMARY
PM PEAK HOUR

Roadway Segment	Direction	TSO[1]	Free-Flow Speed[2]	Existing Conditions[3]		2025 No Project Conditions		2025 With Project Conditions	
				Speed	Delay Index	Speed[4]	Delay Index	Speed[4]	Delay Index
SR 4 – West of Bailey Rd.	EB	3.0	65	28	2.32	14	4.64	14	4.64
SR 4 –East of Bailey Rd.	EB	3.0	65	28	2.32	19	3.42	19	3.42
Bailey Rd – Between SR 4 and Leland Rd.	NB	2.0	25	22	1.14	15	1.67	14	1.79
	SB	2.0	25	21	1.19	12	2.08	10	2.50

Notes:
1. Traffic Service Objective as presented in the *East County Action Plan for Routes of Regional Significance.*
2. Free-flow speed as presented in *East County Action Plan for Routes of Regional Significance.*
3. Existing speed and delay index as presented in the 1999 *Contra Costa Transportation Authority TSO Monitoring Report.*
4. 2025 speed estimation based on the East County Travel Demand Model.
5. Data for mixed-flow lanes only.

Source: Fehr & Peers Associates, September 2002.

With implementation of the following mitigation measure, the impact is reduced to a *less-than-significant* level.

- ❑ **MITIGATION MEASURE 4.4-3:** The project developer shall pay regional and local traffic mitigation fees to help fund the expansion of capacity of Bailey Road between SR4 and Leland Road.

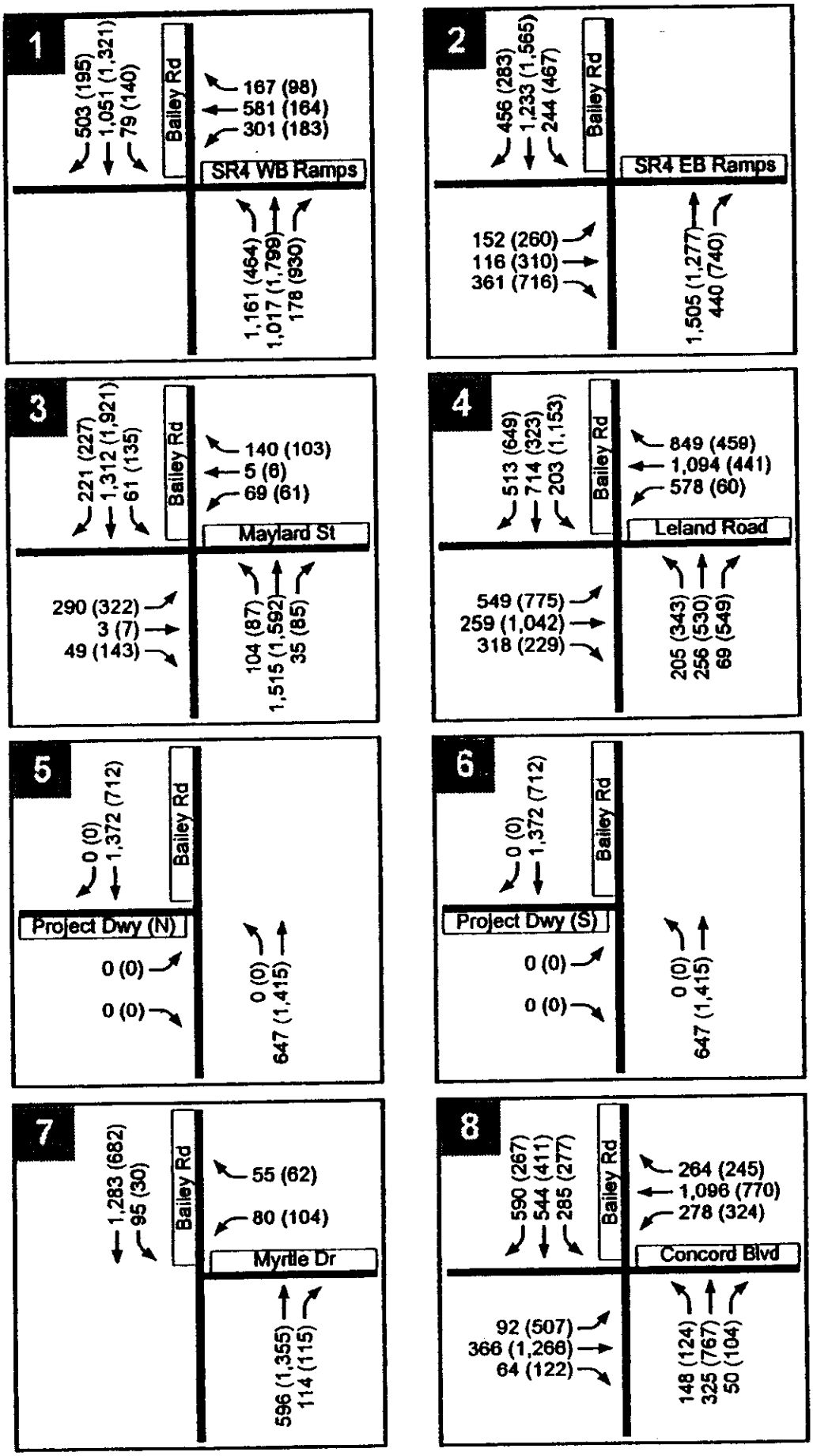
IMPACT 4.4-4: Project-generated traffic would contribute to significant adverse impacts at the Bailey Road / SR4 Eastbound Ramps intersection. This is considered a *significant and unavoidable* impact. Bailey Road / Leland Road and Bailey Road / Myrtle Drive as well as at both intersections of the project access roads with Bailey Road would also experience significant adverse impacts, but these intersections can be mitigated to acceptable levels.

Figure 4.4-14 presents intersection turning movement forecasts for the 2025 No Project scenario. The traffic expected to be generated by the proposed project, as described in the subsection titled "Trip Generation and Distribution," was then added to the forecasts described above, to produce a 2025 With Project scenario. Figure 4.4-15 presents the intersection turning movement forecasts for the 2025 With Project scenario. The intersection level of service results from this analysis are presented in Table 4.4-9.

By the year 2025, five of the existing study intersections are projected to operate at unacceptable levels of service (LOS F) with the proposed project. At one of those intersections, the Bailey Road/ SR4 Westbound Ramps intersection, where the AM peak hour operations are expected to be LOS F, the proposed project would increase the total intersection traffic volume by less than one percent; therefore, this intersection does not meet the standards of significance presented previously.

At the other four locations (Bailey Road / SR4 Eastbound Ramps, Bailey Road / Leland Road, Bailey Road / Myrtle Drive, and Bailey Road / Concord Boulevard), the intersections would operate at unacceptable service levels with the proposed project; in most cases, the intersections would also operate unacceptably without the project. The proposed project would increase the total traffic volume at all these intersections by more than one percent. The two new intersections of the project access roads with Bailey Road would also operate at unacceptable LOS F by the year 2025. Therefore, these locations represent significant impacts.

Although the mitigation measure identified for the Bailey Road / SR4 Eastbound Off-Ramp was recommended in the Alves Ranch Draft EIR, implementation of this mitigation measure is not feasible given the right-of-way constraints along the eastbound approach where the retaining wall along the south side of the off-ramp restricts any possible widening. Therefore, the impact at the Bailey Road / SR4 Eastbound Ramps remains *significant and unavoidable*.

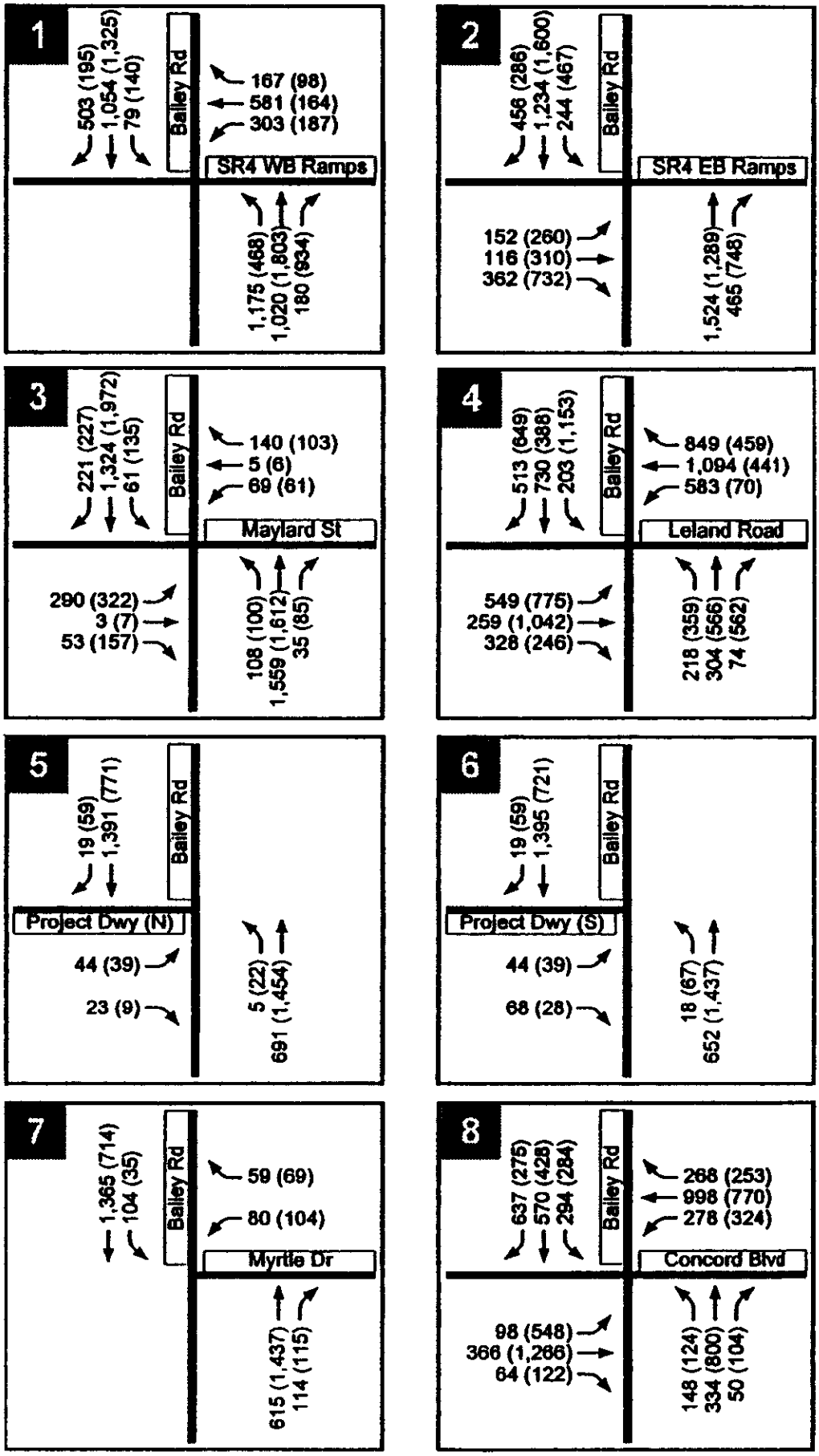


KEY:

XX (YY) = AM (PM) Peak Hour Traffic Volumes

Source: Fehr & Peers

Figure 4.4-14 2025 No Project Peak Hour Intersection Volumes



KEY:

XX (YY) = AM (PM) Peak Hour Traffic Volumes

Source: Fehr & Peers

Figure 4.4-15 2025 With Project Peak Hour Intersection Volumes

Table 4.4-9
INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	2025 No Project				2025 With Project				2025 With Project (Mitigated)			
	AM		PM		AM		PM		AM		PM	
	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS
1. Bailey Rd. / SR 4 WB Ramps	1.31	F	0.81	D	1.32	F	0.81	D	No mitigation required.			
2. Bailey Rd. / SR 4 EB Ramps	0.73	C	1.00	E	0.73	C	1.01	F	0.65	B	0.85	D
3. Bailey Rd. / Maylard St.	0.73	C	0.80	C	0.75	C	0.81	D	No mitigation required.			
4. Bailey Rd. / Leland Rd.	1.34	F	1.32	F	1.35	F	1.33	F	1.35	F[2]	1.28	F[2]
5. Bailey Rd. / Project North Access	N / A		N / A		(EBL) >45	F	(EBL) >45	F	0.80	D[3]	0.83	D[3]
6. Bailey Rd. / Project South Access	N / A		N / A		(EBL) >45	F	(EBL) >45	F	0.81	D[4]	0.82	D[4]
7. Bailey Rd. / Myrtle Dr.	(WB) >45	F	(WB) >45	F	(WB) >45	F	(WB) >45	F	0.80	C	0.88	D
8. Bailey Rd. / Concord Blvd.	1.03	F	1.39	F	1.06	F	1.44	F	0.75	C	0.88	D

Notes:
1. For signalized intersections, volume-to-capacity ratio (v/c) as calculated by the CCTALOS methodology is presented. For unsignalized intersections, delay in seconds for the worst intersection movement as calculated by the 2000 Highway Capacity Manual methodology is presented.
2. Using the CCTALOS methodology, this intersection would continue to operate at unacceptable LOS F with the proposed mitigation measure. However, based on a CORSIM simulation conducted for the Alves Ranch DEIR, the intersection would operate at an acceptable service level with the proposed improvement.
3. These LOS results would occur if the Project North Access intersection were signalized.
4. These LOS results would occur if the Project South Access intersection were signalized.

Source: Fehr & Peers Associates, September 2002.

As shown in Table 4.4-9 with the implementation of the following mitigation measures, the Bailey Road / Concord Boulevard intersection would operate at acceptable service levels under 2025 With Project conditions. However, construction of these improvements is likely to be infeasible due to right-of-way constraints along Concord Boulevard. Therefore, since the full implementation of Mitigation Measure 4.4-4B is infeasible, the impact at the Bailey Road / Concord Boulevard intersection would remain *significant and unavoidable*.

The Bailey Road / Leland Road intersection would continue to operate at LOS F when analyzed using the CCTALOS methodology. However, a detailed CORSIM analysis was conducted for the Alves Ranch Draft EIR, which concluded that the following mitigations would allow this intersection to operate acceptably. It is expected that these mitigation measures would reduce the Bailey Estates project impacts at the Bailey Road / Leland Road intersection to a *less-than-significant* level.

As shown in Table 4.4-9 with implementation of this mitigation measure, the Bailey Road / Myrtle Drive intersection would operate at acceptable service levels under 2025 With Project conditions.

All of the following mitigation measures are required to reduce this impact to a less-than-significant level.

- ❑ **MITIGATION MEASURE 4.4-4A:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / SR4 Eastbound Ramps intersection:
  - Provide additional eastbound right-turn capacity by widening the approach to provide an additional right-turn lane.

- ❑ **MITIGATION MEASURE 4.4-4B:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Leland Road intersection:
  - On the southbound approach, provide an additional right-turn lane.
  - On the westbound approach, widen the approach to minimize the offset between the approach through lanes on the west leg and the receiving lanes on the east leg, and provide a 4-foot-long raised median from Bailey Road to east of Willow Avenue.
  - On the eastbound approach, widen the approach to convert one left-turn lane pocket to a left-turn trap lane, add a 4-foot-long raised median, and a 300-foot-long right-turn pocket.

❑ **MITIGATION MEASURE 4.4-4C:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Concord Boulevard intersection:

- On the northbound approach, provide exclusive lanes for both the right-turn and left-turn movements, and a second through lane.
- On the southbound approach, provide two exclusive left-turn lanes.
- On the eastbound and westbound approaches, provide a third through lane.

❑ **MITIGATION MEASURE 4.4-4D:** The Bailey Road / Myrtle Drive intersection requires signalization, the installation of an exclusive left-turn lane on the southbound Bailey Road approach, and the widening of the westbound Myrtle Drive approach to provide an exclusive left-turn lane.

The developer shall pay a traffic mitigation fee equal to this project's pro rata share of the recommended improvements at the Bailey Road/Concord Boulevard intersection. The traffic mitigation fee shall be paid prior to recordation of the final map, and in an amount to be determined by the City Council in cooperation with the affected jurisdictions. Note that the cumulative impacts on the two intersections will remain *significant and unavoidable* until improvements are installed by responsible jurisdictions that are to receive these fees.

Pedestrian Circulation

Sidewalks are planned to be provided along both sides of all internal streets, including the two access roadway connections to Bailey Road (Streets N and O). However, no sidewalks or pathway would be provided along the site's Bailey Road frontage. From a project pedestrian access standpoint, this would not be considered a significant impact as internal Street A runs parallel to Bailey Road and could easily be used by project residents. The City of Pittsburg may, however, wish to have the project provide a pathway or sidewalk along the entire site frontage in a location that would conform to the ultimate expected widening of Bailey Road from two to four lanes.

San Marco Boulevard Connection to Project Street System

The possibility exists that San Marco Boulevard could be aligned to intersect the project internal roadway system (shown as the Street H connection to Street B along the western project boundary). Based upon the current internal street system layout, there would then be a discontinuous routing of San Marco Boulevard traffic through the site to access Bailey Road, requiring at least four 90-degree turns. Modeling projections show that by 2025 San Marco Boulevard near Bailey Road would be expected to attract about 290 two-way trips during the AM peak hour and about 425 two-way trips during the PM peak hour (not including project traffic).

IMPACT 4.4-5: The project's proposed internal street layout could not safely accommodate projected traffic levels should San Marco Boulevard access Bailey Road via use of the project's internal streets.

❑ **MITIGATION MEASURE 4.4-5:** If the City of Pittsburg determines that San Marco Boulevard would be aligned through the Bailey Estates site, the project site plan should be revised to provide a direct alignment of San Marco Boulevard through the site to a "T" intersection with Bailey Road. No residential units should front on this roadway. In addition, the number of project residential roadway connections to San Marco Boulevard should be minimized, ideally no more than one connection each to the north and south sections of the site. Left- and right-turn deceleration/acceleration lanes should be provided on the San Marco Boulevard approaches to all project access roadways. The roadway would also need to be wide enough to provide Class II bicycle lanes as designated in the Regional Transportation Planning Committee's Bicycle Action Plan.

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[1] Paul Reinders, City of Pittsburg Community Development Department, Engineering Division, personal communication, March 2001.

[2] John Templeton, City of Concord Transportation Manager, personal communication, March 2001.

[3] *Pittsburg General Plan Update: Existing Conditions and Planning Issues*, June 1998.

[4] *Draft East County Action Plan for Routes of Regional Significance*, June 2000.

[5] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001, Table 7-1.

4.5 NOISE

Setting

Background

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 4.5-1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA.* This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 4.5-2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night—because excessive noise interferes with the ability to sleep—24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL,* is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added

Table 4.5-1
Definitions of Acoustical Terms

TERM	DEFINITIONS
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, HZ	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dB	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Illingworth & Rodkin, Inc./Acoustical Engineers

Table 4.5-2
Typical Sound Levels Measured in the Environment and Industry

At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Diesel Pile Driver (100')	100		Very Loud
	90	Boiler Room	
Freight Cars (50')		Printing Press Plant	
Pneumatic Drill (50')	80		
Freeway (100')		In Kitchen With Garbage	
Vacuum Cleaner (10')	70	Disposal Running	Moderately Loud
	60	Data Processing Center	
Light Traffic (100')	50	Department Store	
Large Transformer (200')			
	40	Private Business Office	Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

Source: Illingworth & Rodkin, Inc./Acoustical Engineers

to evening (7:00 p.m. to 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. to 7:00 a.m.) noise levels. The *Day/Night Average Sound Level, L_{dn},* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Regulatory Background

The Noise Element of the Pittsburg General Plan[1] sets forth policies related to community noise. The following policies are applicable to this project:

NOISE ELEMENT

Goals:

12-G-1 Protect public health and welfare by eliminating or minimizing the effects of existing noise problems, and by preventing increased noise levels in the future.

12-G-2 Encourage criteria such as building design and orientation, wider setbacks, and intense landscaping in lieu of soundwalls to mitigate traffic noise along all major corridors, except along State Route 4.

12-G-3 Continue efforts to incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.

Policies:

12-P-1 As part of development review, use [General Plan] Figure 12-3 to determine acceptable uses and installation requirements in noise-impacted areas.

12-P-4 Require noise attenuation programs for new development exposed to noise above normally acceptable levels. Encourage noise attenuation programs that avoid visible soundwalls.

12-P-5 Require that applicants for new noise-sensitive development, such as schools, residences, and hospitals, in areas subject to noise generators producing noise levels greater than 65 dB CNEL obtain the services of a professional acoustical engineer to provide a technical analysis and design of mitigation measures.

12-P-6 Ensure that new noise-sensitive uses, including schools, hospitals, churches, and homes, in areas near roadways identified as impacting sensitive receptors by producing noise levels greater than 65 dB CNEL ([General Plan] Figure 12-1), incorporate mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL.

There appears to be a conflict between the 60 dB "normally acceptable" threshold as shown in General Plan Figure 12-3 and Policy 12-P-5 that uses a threshold of 65 dB CNEL. Both thresholds are addressed in this study, although the more conservative threshold (60 db) has been used to develop appropriate mitigation.

Existing Noise Environment

The Bailey Estates project site is located along Bailey Road south of the developed portion of the City of Pittsburg. The only significant source of environmental noise in the area is vehicular traffic on Bailey Road. There are no noise sensitive receptors (e.g., single-family residences or hospitals) in the immediate project vicinity, but there are sensitive receptors near Bailey Road in the area of the Pittsburg/Bay Point BART Station.

A noise monitoring survey was completed to quantify existing noise levels at the project site. The locations where the measurements were made are depicted on Figure 4.5-1. Noise levels were monitored at one long-term site (LT-1) over a full two-day period on March 6–8, 2001. The location was 85 feet from the centerline of Bailey Road overlooking the roadway. The measured noise levels were 66 to 67 dB CNEL on both days. Figure 4.5-2 displays the detailed results of this measurement. Additional short-term measurements (ST-1, ST-2, and ST-3) were conducted at three locations, including one adjacent to the long-term site. The results of these measurements are shown in Table 4.5-3.

Measurements distant from Bailey Road on the hilltops were conducted to determine if any other significant sources of noise could potentially affect project development at the higher elevation. No other significant noise sources were heard during the monitoring survey.

Impacts and Mitigation Measures

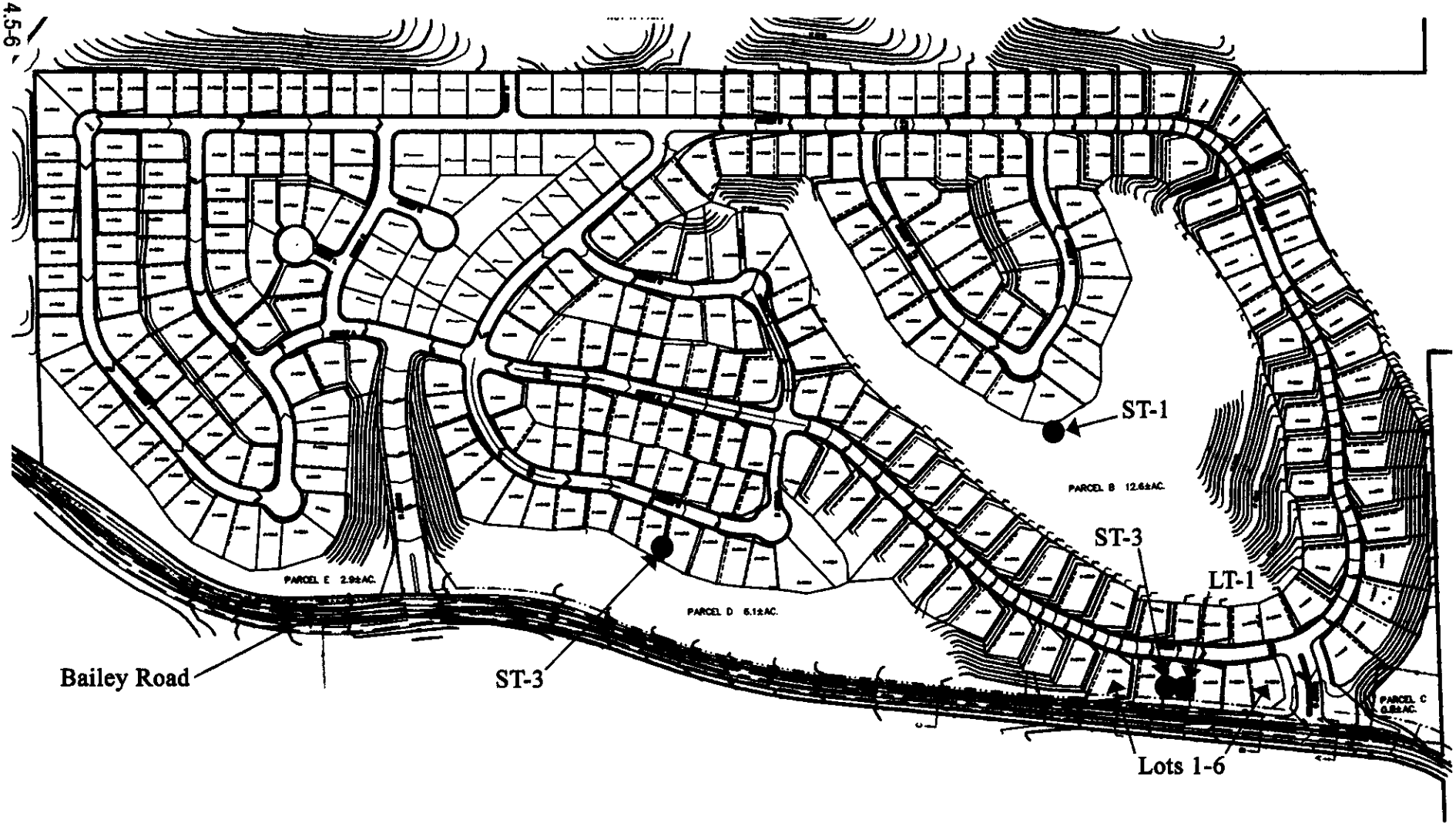
Significance Criteria

This subsection describes impacts associated with noise. CEQA Guidelines (2003) define a significant impact of a project on the environment as one that would:

- generate or expose people to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- generate or expose people to excessive groundborne vibration or groundborne noise levels;
- cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

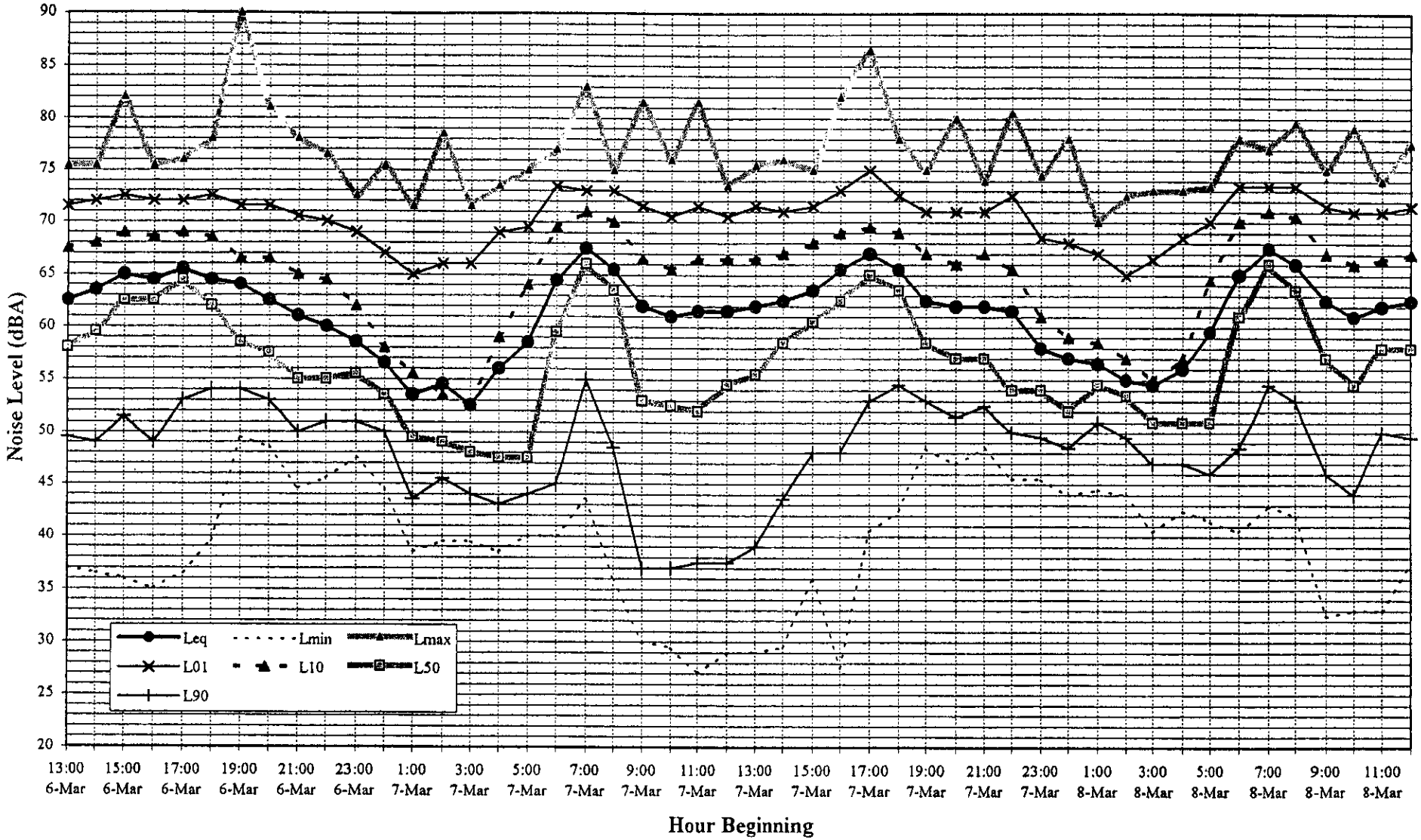
The Pittsburg General Plan establishes 60 and 65 CNEL as the goal for outdoor noise and 45 CNEL as the goal for interior noise.

The proposed project would result in increased traffic along Bailey Road. If traffic noise levels along Bailey Road, where existing sensitive receptors occur, would increase by 3 dB or more as a result of project traffic, then this would be considered a substantial permanent increase in ambient noise levels leading to the finding of a significant impact.



Source: Illingworth & Rodkin, Inc.

Figure 4.5-1 Noise Monitoring Locations



Source: Illingworth & Rodkin, Inc.

Figure 4.5-2 Hourly Noise Levels Measured 85 Feet from the Center Line of Bailey Road (March 6-8, 2001)

Table 4.5-3
Summary of Short-Term Noise Measurements

Location	Time/ Date	L_{eq} (dBA)	$L_{(1)}$ (dBA)	$L_{(10)}$ (dBA)	$L_{(50)}$ (dBA)	$L_{(90)}$ (dBA)	Est. CNEL (dBA)	Noise Source
ST-1: ~ 636 ft. from the centerline of Bailey Road	1:30 p.m. 03/06/01	54	61	57	53	48	57	Bailey Road, wind
ST-2: ~ 85 ft. from the centerline of Bailey Road	3:00 p.m. 03/08/01	64	72	68	60	50	67	Bailey Road
ST-3: ~ 250 ft. from the centerline of Bailey Road	3:35 p.m. 03/08/01	57	62	59	56	52	60	Bailey Road, wind

Source: Illingworth & Rodkin, Inc./Acoustical Engineers

Because there are no existing residential uses or other sensitive receptors in the project vicinity that could be affected by short-term construction-related noise, the project will not cause a substantial temporary or periodic noise impacts during construction. Thus, no further analysis of construction noise impacts is required.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Noise and Land Use Compatibility

IMPACT 4.5-1: Noise levels exceed both the 60 and 65dB land use guidelines for single-family residential development for Lots 1–6.

The site plan for the proposed project is shown on Figure 2-3. Graded lots are proposed at elevations above Bailey Road in most cases. These flat-graded pads provide some natural attenuation of the traffic noise. At the northern end of the project, development of Lots 1–6 are about at-grade with the roadway and these are the closest lots to the roadway. Projected noise levels in the rear yards of these lots, without noise mitigation, is a CNEL of 67 dBA. The project would be inconsistent with General Plan Goal 12-G-2 and General Plan Policy 12-P-4.

Either of the following mitigation measures would be necessary to reduce exterior noise impacts to a less-than-significant level.

❑ **MITIGATION MEASURES:**

4.5-1A: A 9-foot tall noise barrier fence shall be constructed at the rear of the flat-graded pads for Lots 1–6 adjacent to Bailey Road, in order to reduce the exterior noise to a CNEL of 60 dB. The noise barrier shall be designed by an acoustical engineer to ensure compliance with the 60dB standard. Suitable materials include wood, pre-cast concrete or masonry panels, or masonry block.

Secondary Impact with Mitigation Implementation: Implementing this policy would be inconsistent with General Plan goals and policies that discourage visible sound walls.

4.5-1B: Revise the site plan to eliminate Lots 1–6 that are located immediately adjacent to Bailey Road. Implementing this mitigation would be in keeping with Policies 12-G-2 and 12-P-4 in the General Plan.

Interior Noise Levels

IMPACT 4.5-2: Units exposed to an outdoor CNEL exceeding 60 dB are expected to exceed the interior noise goal of 45 CNEL unless properly insulated.

The goal for interior noise levels in single-family residences in Pittsburg is a CNEL of 45 dB or less. Conventional California construction with windows closed normally provides about 25 dBA of noise reduction when going from outside to inside the building. Therefore, no special building sound insulation treatments are expected to be required to achieve the 45 CNEL interior goal. Windows should be assumed to be closed, however, to achieve the 25 dBA of noise reduction noted above.

❑ **MITIGATION MEASURE 4.5-2:** House designs shall incorporate forced air mechanical ventilation or air conditioning to provide a habitable interior environment with the windows closed for Lots 1–13, 18–30, 118-120, and 214–226.

Traffic Noise Impacts

IMPACT 4.5-3: Traffic noise associated with the project would increase noise levels by 1 dBA. This is considered a *less-than-significant* impact.

The proposed project would cause an increase in vehicular traffic on Bailey Road. Traffic data prepared by Crane Transportation Group was reviewed to determine whether or not traffic noise levels would increase substantially at any sensitive receptors along Bailey Road as a result of project-generated traffic. The analysis concludes that the CNEL along Bailey Road would increase, at most, about 1 dBA as a result of project-generated traffic. This increase is less than substantial and would not cause a significant impact.

❑ **MITIGATION MEASURE 4.5-3:** No mitigation is required.

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[1] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

4.6 AIR QUALITY

Setting

Air Basin Characteristics

Pittsburg is located on the south side of the San Joaquin River delta east of the Carquinez Straits. Its location between the greater Bay Area and the Central Valley has a great influence on the climate and air quality of the area.

Wind records from sites in Pittsburg show a strong predominance of westerly winds. Average wind speed is relatively high, over 10 miles per hour (mph), and the frequency of calm winds is quite low.[1] The Pittsburg area has a relatively low potential for air pollution given the persistent and strong winds typical of the area. These winds dilute pollutants and transport them away from the area, so that emissions released in the Pittsburg area may impact air quality in the Sacramento and San Joaquin valleys. Pittsburg's location downwind of the greater Bay Area also means that pollutants from other areas are transported to Pittsburg.

Air Quality Standards and Pollutant Characteristics

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant.

The federal and California state ambient air quality standards are summarized in Table 4.6-1 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM_{10}.

The USEPA established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The existing 1-hour ozone standard of 0.12 parts per million (ppm) will be phased out and replaced by an 8-hour standard of 0.08 ppm. New national standards for fine Particulate Matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

Implementation of the new ozone and Particulate Matter standards was complicated by a lawsuit. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the Clean Air Act as applied in setting the new public health standards for ozone and particulate matter, was unconstitutional as an improper delegation of legislative authority to the USEPA. The decision was appealed to the Supreme Court, and on February 27, 2001, the Supreme Court unanimously ruled in favor of the USEPA, clearing the way for implementation of the new standards. During the interim period, the California Air Resources Board developed recommended

Table 4.6-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	0.12 ppm 0.08 ppm	0.09 ppm --
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.05 ppm --	-- 0.25 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm --	-- 0.05 ppm 0.5 ppm
PM_{10}	Annual 24-Hour	50 $\mu g/m^3$ 150 $\mu g/m^3$	20 $\mu g/m^3$ 50 $\mu g/m^3$
$PM_{2.5}$	Annual 24-Hour	15 $\mu g/m^3$ 65 $\mu g/m^3$	12 $\mu g/m^3$ --
Lead	30-Day Average Month Average	-- 1.5 $\mu g/m^3$	1.5 $\mu g/m^3$ --

ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter

designations for California air basins, proposing that the Bay Area be designated as "non-attainment" for the new 8-hour ozone standard. Regarding particulates, the state had adopted a standard for $PM_{2.5}$ that is different than the Federal standard. However, to determine if an area is an "attainment" or "non-attainment" area requires a monitoring network for $PM_{2.5}$ and a minimum 3-year monitoring period. If the San Francisco Bay Region or the north coast of Contra Costa County is found to be a "non-attainment" area for $PM_{2.5}$, an attainment plan will be developed by the regulatory agencies.

Health Effects of Pollutants

The primary air quality problems in Pittsburg and the Bay Area are ozone and particulate matter. Prior to 1992, carbon monoxide had also been a problem within the San Francisco Bay Air Basin. The following is a discussion of the health effects of these important pollutants.

Ozone

Ozone is produced by chemical reactions, involving nitrogen oxides (NO_x) and reactive organic gases (ROG), that are triggered by sunlight. Nitrogen oxides are created during combustion of fuels, while reactive organic gases are emitted during combustion and evaporation of organic solvents. Since ozone is not directly emitted to the atmosphere, but is formed as a result of photochemical reactions, it is considered a secondary pollutant. In the Bay Area, ozone is a seasonal problem, occurring roughly from April through October.

Ozone is a strong irritant that attacks the respiratory system, leading to the damage of lung tissue. Asthma, bronchitis and other respiratory ailments as well as cardiovascular diseases are aggravated by exposure to ozone. A healthy person exposed to high concentrations may become nauseated or dizzy, may develop headache or cough, or may experience a burning sensation in the chest.

Research has shown that exposure to ozone damages the alveoli (the individual air sacs in the lung where the exchange of oxygen and carbon dioxide between the air and blood takes place). Research has shown that ozone also damages vegetation.

Suspended Particulate

Suspended particulate matter consists of solid and liquid particles small enough to remain suspended in the atmosphere indefinitely. The major components of suspended particulate are dust particles, nitrates, and sulfates. A portion of suspended particulate is directly emitted to the atmosphere as a by-product of combustion, wind erosion of soil and unpaved road travel. Small particles are also created in the atmosphere through chemical reactions.

Particles greater than 10 microns in diameter can cause irritation in the nose, throat, and bronchial tubes. Natural mechanisms remove much of these particles, but smaller particles are able to pass through the body's natural defenses and the mucous membranes of the upper respiratory tract and enter into the lungs. The particles can damage the alveoli, tiny air sacs responsible for gas exchange in the lungs. The particles may also carry carcinogens and other toxic compounds, which adhere to the particle surfaces and can enter the lungs.

Carbon Monoxide

Carbon monoxide is a local pollutant in that high concentrations are found only very near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Carbon monoxide concentrations are highly seasonal, with the highest concentrations occurring in the winter. This is partly due to the fact that automobiles create more carbon monoxide in colder weather and partly due to the very stable atmospheric conditions that exist on cold winter evenings when winds are calm. Concentrations typically are highest during stagnant air periods within the period of November through January.

Regional Air Quality Planning

Both the federal and state governments have enacted laws mandating the identification of areas not meeting the ambient air quality standards and development of regional air quality plans to eventually attain the standards. For the federal standards, the entire Bay Area is a non-attainment area for ozone. The Bay Area is attainment or unclassified for other federal standards.

The current federal regional air quality plan is the *Bay Area 2001 Ozone Attainment Plan*. It was prepared by the Bay Area Air Quality Management District (BAAQMD), the Metropolitan Transportation Commission, and the Association of Bay Area Governments. The plan was prepared in response to USEPA's partial approval and partial disapproval of the *Bay Area 1999 Ozone Attainment Plan*. The responsible agencies have begun an update to the federal regional ozone plan and completion is expected in 2004. The updated plan will consider measures to reduce emissions of ozone-forming pollutants from transportation sources, industrial facilities, commercial processes and other sources.

Under the California Clean Air Act, the Bay Area is a non-attainment area for ozone and PM_{10}. and either "attainment" or "unclassified" for other state standards. The California Clean Air Act requires local air pollution control districts to prepare air quality attainment plans. Unlike a federal air quality plan, rather than planning for attainment by a specific date the state plan must provide for district-wide-emission reductions of five percent per year averaged over consecutive three-year periods. If this is not possible, then the plan must provide for adoption of "all feasible measures on an expeditious schedule."

The *Bay Area 2000 Clean Air Plan* is the strategy to attain the more stringent California ozone standard. The California Clean Air Act requires the BAAQMD to update the Clean Air Plan every three years. The 2003 update to the Clean Air Plan will be occurring at the same time as the update of the federal plan. The 2003 update will include a control strategy review to ensure that the plan continues to include "all feasible measures" to reduce ozone, an update of the District's emission inventory, estimates of emission reductions achieved by the plan, and an assessment of air quality trends.

Current Air Quality

The project site is within the nine-county San Francisco Bay Area Air Basin. The BAAQMD operates a network of air quality monitoring sites in the region, including a site in Pittsburg. A summary of air quality data from this monitoring site is shown in Table 4.6-2. Data are shown for the years 2000–2002.

Table 4.6-2 indicates that the federal ambient air quality standards for most criteria pollutants are met at Pittsburg. Concentrations of ozone and PM_{10} do, however, exceed the more stringent state standard.

Table 4.6-2
Summary of Air Quality Data for Pittsburg, 2000-2002 [1]

Pollutant	Standard	Number of Annual Violations in:		
		2000	2001	2002
Ozone	State 1-Hour	1	2	2
Ozone	Federal 1-Hour	0	0	0
Ozone	Federal 8-Hour	0	1	1
Sulfur Dioxide	State 1-Hour	0	0	0
Carbon Monoxide	State/Federal 8-Hour	0	0	0
Nitrogen Dioxide	State 1-Hour	0	0	0
PM_{10}	Federal 24-Hour	0	0	0
PM_{10}	State 24-Hour	6	18	8

[1] California Air Resources Board, *Aerometric Data Analysis & Management (ADAM)*, 2003.

General Plan Policies

The Pittsburg General Plan[2] contains the following goal and policy relevant to air quality conditions in the project site vicinity:

RESOURCE CONSERVATION ELEMENT

Goal:

9-G-11 Reduce the number of motor vehicle trips and emissions accounted to Pittsburg residents and encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.

Policy:

9-P-33 Encourage new residential development and remodeled existing homes to install clean-burning fireplaces and wood stoves.

Pollutant Sources and Sensitive Receptors

The project is surrounded by open land. The Keller Canyon landfill, a potential source of odors and landfill gas, is located east of the project site. The project site and the landfill are separated by elevated terrain.

The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to located. These land uses include residences, schools playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. There are no sensitive receptors near the project site. The project would, however, itself be a new sensitive receptor.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with air quality. The BAAQMD[3] and CEQA Guidelines (2003) define a significant impact of a project on the environment as one that would:

- contribute to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours or 20 ppm for one hour; or
- generate criteria air pollutant emissions in excess of the BAAQMD annual or daily thresholds. The current thresholds are 15 tons/year or 80 pounds/day for Reactive Organic Gases (ROG), Nitrogen Oxides (NO_x) or PM_{10}. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact; or
- create or frequently expose members of the public to objectionable; or
- expose sensitive receptors or the general public to substantial levels of toxic air contaminants or pollutant concentrations; or
- conflict with or obstruct implementation of the applicable air quality plan; or
- violate any air quality standard or contribute substantially to an existing or projected air quality violation; or
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The BAAQMD significance thresholds for construction dust impacts are based on the appropriateness of construction dust controls. The BAAQMD guidelines provide feasible control measures for construction emission of PM_{10}. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less than significant.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Construction Activity Emissions

IMPACT 4.6-1: Construction activities such as clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local air quality.

During construction various diesel-powered vehicles and equipment would be in use on the site. Such vehicles and equipment would be a source of exhaust gases such as reactive organic gases (ROG), nitrogen oxides (NOx) and carbon monoxide (CO). BAAQMD CEQA Guidelines provide, however, that "PM_{10} is the pollutant of greatest concern with respect to construction activity."

Project construction would result in grading, earthmoving and excavation activities that would generate dust. The dry soil conditions in summer and frequent strong afternoon winds exacerbate the potential for dust nuisance. Although there are currently no sensitive receptors adjacent the site, the potential for dust nuisance would exist in the latter phases of construction when grading/excavation activities take place upwind of previously-developed phases of the development. Construction dust impacts are considered to be potentially significant on a localized basis.

In 1998, the California Air Resources Board (CARB) identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[4] High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk. BAAQMD CEQA Guidelines identify the following types of facilities as having a potential for exposing sensitive receptors to high levels of diesel exhaust:

- truck stop;
- warehouse/distribution center;
- large retail or industrial facility;
- high volume transit center;

- school with high volume of bus traffic;
- high volume arterial/roadway with high level of diesel traffic.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction-related sources are mobile and transient in nature, and the bulk of the emission occurs within the project site at a substantial distance from nearby receptors. Because of its short duration and distance from receptors, health risks from construction emissions of diesel particulate would be a less-than-significant impact.

❑ **MITIGATION MEASURE 4.6-1:** The project developer shall submit a dust control plan that incorporates the following measures as recommended by the BAAQMD:

- Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives;
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas;
- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 miles per hour;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph;
- Limit the area subject to excavation, grading and other construction activity at any one time; and
- The project sponsor shall require their contractors and subcontractors to fit all internal combustion engines with mufflers which are in good condition.

Carbon Monoxide Concentrations

IMPACT 4.6-2: Traffic generated by the project would increase local carbon monoxide concentrations. This is considered a *less-than-significant* impact.

On the local scale, the pollutant of greatest interest is carbon monoxide (CO). Carbon monoxide is an odorless, colorless poisonous gas whose main source in the Bay Area is automobiles. Concentrations of this pollutant are related to the levels of traffic and congestion along streets and at intersections.

A screening form of the CALINE-4 computer simulation model was applied to two intersections near the project site. The two selected intersections were signalized intersections that would operate at Level of Service D or worse for one or more of the traffic scenarios. The model results were used to predict the maximum one- and eight-hour concentrations, corresponding to the one- and eight-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide. The CALINE-4 model and the assumptions made in its use for this project are described in Appendix D.

Table 4.6-3 shows the results of the CALINE-4 analysis for peak one-hour and eight-hour periods, in parts per million (ppm). The analysis was carried out with existing traffic (2001), year 2005 base case traffic, year 2005 with the addition of project traffic and cumulative year 2025 traffic with the addition of project traffic. The one-hour values are to be compared to the federal one-hour standard of 35 ppm and the state standard of 20 ppm, while the eight-hour values are to be compared to the state and federal standard of 9 ppm.

Table 4.6-3 shows that predicted concentrations at both intersections are currently below the state and federal standards. Year 2005 and 2025 concentrations are expected to be below current levels, despite increased traffic from approved development, due to the declining emission rates for the vehicle fleet as older, more polluting, cars are replaced by newer, cleaner cars. The addition of project-related traffic would increase carbon monoxide concentrations at the intersections studied by no more than 0.1 ppm. At both intersections, projected concentrations would remain below the applicable state and federal standards. The impact of the project on local carbon monoxide concentrations is considered to be less than significant.

❑ **MITIGATION MEASURE 4.6-2:** No mitigation is required.

Table 4.6-3
Projected Curbside Carbon Monoxide Concentrations, in Parts Per Million

Intersection	Existing (2001)		Background (2005)		Background + Project (2005)		Cumulative + Project (2025)	
	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr
Bailey Road/ West Leland Road	7.6	4.0	6.3	3.3	6.3	3.3	5.5	2.9
Bailey Road/ Concord Blvd.	7.0	3.6	5.9	3.1	6.0	3.1	5.5	2.9
Most Stringent Ambient Air Quality Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

Traffic-Related Regional Emissions

IMPACT 4.6-3: New traffic and area-source emissions generated by the project would increase regional emissions, but would not exceed the air district's thresholds of significance. This is considered a *less-than-significant* impact.

The project would attract and generate vehicle trips. The emissions associated with vehicle trips have been estimated using the URBEMIS-2001program.[5] The URBEMIS-2001 program and the assumptions made in its use are described in Appendix D. The daily increase in regional emissions from auto travel are shown in Table 4.6-4 for reactive organic gases (hydrocarbons) and oxides of nitrogen (the two precursors of ozone) and PM_{10}. Based on the 2001 program, project vehicle emissions fall well below the BAAQMD significance threshold.

Table 4.6-4
Project Regional Emissions in Tons Per Year

	Reactive Organic Gases	Nitrogen Oxides	PM_{10}
Project Vehicular Emissions	45.5	40.0	24.6
BAAQMD Significance Threshold	80.0	80.0	80.0

The BAAQMD has established a threshold of significance for ozone precursors and PM_{10} of 80 pounds per day. Project-related emissions from vehicles are below these thresholds of significance for all three regional pollutants, so project impacts on regional air quality would be *less than significant.*

❑ **MITIGATION MEASURE 4.6-3:** No mitigation is required.

Odors

IMPACT 4.6-4: The project would place a new sensitive receptor (residents) within one mile of an existing landfill operation. This is considered a *less-than-significant* impact.

The project would place sensitive receptors less than a mile from the existing Keller Canyon landfill. However, the potential for odor nuisance is exceedingly small. The project is upwind of the landfill under normal weather conditions, and is separated from the landfill by a ridgeline. During the nighttime hours (when odor nuisance potential is at a maximum due to light winds) hilly areas are subject to drainage winds (shallow flows of air moving downhill along watercourses). The project is in a different watercourse than the landfill. It is also uphill from the landfill and thus drainage flows could not carry any odors emanating from the landfill towards the project site during nighttime hours.

❑ **MITIGATION MEASURE 4.6-4:** No mitigation is required.

Stationary Regional Emissions

IMPACT 4.6-5: Residences may include wood-burning fireplaces that affect regional air quality and are a potential source of nuisance.

Wood smoke from fireplaces and wood stoves are residential sources of pollutants receiving increasing scrutiny in the past few years. Wood smoke has generated numerous complaints to the BAAQMD. Although constituting a very small percentage of total PM_{10} emissions on an annual basis, wood smoke is a major contributor to reduced visibility and reduced air quality on winter evenings in both urban and rural areas.

The potential for wood smoke problems is related to a number of factors. The density of development is of primary importance, as is the terrain of the area. The project occupies an east-facing hillside. On cold, clear, calm nights in winter (a time of maximum residential wood burning) it can be expected that any wood smoke generated is likely to be transported slowly by drainage flows towards the east and north, affecting the residences in the lowest elevations within the site

along Bailey Road. An alternative to use of wood is EPA-certified fireplaces and fireplace inserts, which are 75 percent effective in reducing emissions from this source. Implementation of the following mitigation measure would bring the project into consistency with General Plan Policy 9-P-33.

- ❑ **MITIGATION MEASURE 4.6-5:** Only natural gas fireplaces, pellet stoves or USEPA-certified wood-burning fireplaces/stoves shall be permitted. Conventional open-hearth fireplaces shall not be permitted.

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[1] California Department of Water Resources, *Wind in California*, Bulletin No. 185, January 1978.

[2] City of Pittsburg. *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

[3] Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, April 1996 (Revised December 1999).

[4] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

[5] San Joaquin Valley Unified Air Pollution Control District, *URBEMIS User's Guide*, October 2000.

4.7 PUBLIC SERVICES/UTILITIES

Setting

Fire Protection

The Bailey Estates site is served by the Contra Costa County Fire Protection District (CCCFPD) and is located approximately three miles from Fire Station 87 in the City of Pittsburg and 3.4 miles from Fire Station 8 in the City of Concord. The recently-constructed Fire Station 87 is located on West Leland Road at Henry Johnson Parkway in the City of Pittsburg. This station is equipped with two engines, including one specially-equipped all-wheel-drive engine for fighting wildland fires, and is staffed with three firefighters per shift. Fire Station 8 is located at 4647 Clayton Road in the City of Concord. This is also a three-man station and is also equipped with two engines, including an all-wheel drive engine. Because both stations are more than 1.5 miles from the project site, service to the project site from the nearest station (Fire Station 87) would take approximately 8 to 10 minutes from the time a call is placed to the time fire safety personnel arrive at the project site, which is greater than the 5-minute response time frame specified as a goal both by the CCCFPD and by the Pittsburg General Plan.[1] All firefighters are trained as a EMT-D (emergency medical technician-defibrillator). In addition, the CCCFPD is currently engaged in a program to provide at least one fire suppression personnel who is also a trained paramedic for all shifts at all stations.

The Pittsburg General Plan (2001) identifies the issue of increased wildland fire risk and the potential need for additional fire protection facilities to serve new development in the southern hills.

The following General Plan performance standard, goal and policies would apply to the project:

GROWTH MANAGEMENT ELEMENT: FIRE

Performance Standard:

3-S-3 Ensure that the Contra Costa Fire Protection District can maintain a five-minute response time for 90 percent of emergency calls.

PUBLIC FACILITIES ELEMENT: FIRE PROTECTION

Goal:

11-G-8 Require development in areas of high fire hazard to be designed and constructed to minimize potential losses and maximize the ability of fire personnel to suppress fire incidents.

Policies:

11-P-24 Amend the subdivision regulations to include a requirement for detailed fire prevention and control, including community firebreaks, for projects in high and extreme hazard areas.

11-P-25 Review and amend ordinances that regulate development in potentially hazardous locations to require adequate protection, such as fire-resistant roofing, building materials, and landscaping.

11-P-26 Cooperate with Contra Costa County Fire Protection District (CCCFPD) to ensure that all new or relocated fire stations are constructed on appropriate sites within the 1.5-mile response radii from new or existing development.

11-P-28 Cooperate with CCCFPD in obtaining a site for a new fire station (or relocation of Station 86) in the vicinity of State Route 4 and west of Bailey Road.

Police Protection

Existing law enforcement is provided by the Contra Costa County Sheriff's Department. When the project is annexed to the City of Pittsburg, police protection will be provided by the City of Pittsburg Police Department. The Department operates its patrols out of the City Hall facility at 65 Civic Avenue and a Community Relations Unit at 2247 Railroad Avenue. The Department has no substations and operates its patrolling programs on a "beat" basis, with a total of eight beats for the City.

The development will be located within the City's Beat 4, which encompasses the portion of Pittsburg south of State Route 4 (SR4) to the western and southern city limits, and to Jacqueline Drive to the east. This area is patrolled on a 24-hour basis by one officer in a patrol car. Most service calls within Beat 4 are made between the hours of 3:00 p.m. and 11:00 p.m. throughout the week. Emergency and non-emergency response times to the project site would vary as all calls are handled on a priority basis. Life-threatening or personal injury calls are given first priority. The Police Department estimates[2] that calls to the project site could be handled with existing staff within the following General Plan-prescribed minimum time frames:

Level I: 3–5 minute response time for all emergency calls
Level II: 5–8 minute response time for non-emergency priority calls
Level III: 10–20 minute response time for non-emergency calls.

In addition, the General Plan contains the following policy and performance standard:

Policy:

10-P-39: Strive to maintain a ratio of 1.8 sworn officers per 1,000 residents.

Response times to the site within Beat 4 appear to meet the General Plan standard. However, at the present time a ratio of 1.4 sworn officers per 1,000 residents is maintained throughout the city. For a city with a population of 56,769 persons (the year 2000 U.S. Census population of Pittsburg), increasing the sworn officer ratio from 1.4 to 1.8 would require the addition of 25 sworn officers to the Police Department. The Bailey Estates project has a forecasted population of 957 persons, which would require the addition of 2 sworn officers to the department. However, in discussions with the Police Department representative[3] it was unclear how/whether the performance standard could be met with present budget constraints.

Schools

Students from the project would attend schools within the Mount Diablo Unified School District. Students residing at the project site would be assigned to attend Bel Air Elementary School, Riverview Middle School and Mount Diablo High School. Bel Air Elementary School accommodates grades K-5 and is located at 663 Canal Road in Bay Point, approximately 2 miles from the project site. Capacity at this school is 702 students with an October 2002 enrollment of 697. Riverview Middle School, located at 205 Pacifica Avenue in Bay Point, within approximately 6 miles of the project site, has capacity for 893 students and had an October 2002 enrollment of 986 students. Mount Diablo High School, located at 2450 Grant Street in Concord, within approximately 11 miles of the project site, has capacity for 1,769 students and had an October 2002 enrollment of 1,671 students.

A new elementary school with a capacity of 807 students is under construction within the San Marco development, in the Southwest Hills off of West Leland Road, approximately 2 miles northwest of the project site.

Without the project, and assuming the development of Alves Ranch, Americana, Oak Hills South, and San Marco developments in the City of Pittsburg, Mount Diablo Unified School District estimates the following school enrollment demand:

- The combined future enrollment for Bel Air and San Marco Elementary Schools is estimated to be 1,874 students, exceeding the 1,509-student capacity by 365 students.
- For Riverview Middle School, the future enrollment is estimated to be 1,527 students, exceeding the 893-student capacity by 634 students.
- For Mount Diablo High School, the future enrollment is estimated to be 2,102 students, exceeding the 1,769-student capacity by 333 students.

A combination elementary/junior high school with an estimated capacity of 800 students has also been proposed as part of the Alves Ranch development. However, at the time that this Draft EIR was prepared, the Alves Ranch development was not entitled. Though proposed as part of the Alves Ranch project, the school in that development is not anticipated to be constructed in the near term (i.e., before 2025). The proposed school in the Alves Ranch development has therefore been excluded from these estimates. If constructed as proposed, the Alves Ranch school would nonetheless alleviate some of the overcrowding at the Bel Air, San Marco and Riverview campuses.

The School District estimates that, when fully occupied, the project will result in a total of 112 new elementary school students, 62 new middle school students, and 65 new high school students.[4] The District provides bus service to all elementary school students greater than 1.5 miles from their assigned school and all middle school students greater than 3 miles from their assigned school. It has been District policy to provide bus service to Mount Diablo High School for all students residing in Pittsburg and Bay Point.[5]

At the present time the School District receives development fees on all new housing. The fee rate is currently set at $2.05 per square foot. Senate Bill 50 was signed into law in November 1998 which allows school districts to increase fees up to $2.80 per square foot upon completing a Facility Needs Assessment. This law also provides that when the state exhausts monies allocated for new schools, developers are responsible for the cost of the school. The developer is reimbursed by the state when funds have been reinstated.

The following General Plan school-related goal and policies would apply to the proposed project:

GROWTH MANAGEMENT ELEMENT: OPEN SPACE, YOUTH AND RECREATION GOALS: EDUCATIONAL FACILITIES

Goal:

8-G-10 Ensure that school facilities maintain adequate capacity to provide for current and projected enrollment.

Policies:

8-P-38 Work with Mount Diablo Unified School District to ensure that the timing of school construction and/or expansion is coordinated with the phasing of new residential development.

8-P-40 As part of development review for large residential subdivisions (greater than 100 units), evaluate the need for new school sites. If needed, encourage subdivision design to accommodate new school facilities and cooperate with the school districts in acquisition of those sites.

Performance Standard:

3-S-18 Ensure that new development provides necessary funding as required by State law and/or capital facilities to ensure public schooling at or under capacity for all Pittsburg youth.

Park and Recreation Services

The City of Pittsburg's 314-acre park system is administered by the Recreation Department. Two neighborhood parks are located within 1.5 to 2 miles of the project site: the 5-acre Oak Hills Park, located inside the Oak Hills neighborhood, and the 3.5-acre Hillsdale Park, located south of West Leland Road. Each of these parks contains picnic areas, play areas and limited sports facilities.

According to the General Plan, nearly all new parkland acquisition in the past 15 years is the result of park dedication for new development. The General Plan also establishes a goal of providing five acres of parkland per 1,000 residents. The project, which has a projected population of 957 people, would therefore have a parkland dedication requirement of 4.52 acres of "active" parkland under the General Plan. As set forth in Chapter 17.32 of the City's Municipal Code, an "in-lieu fee" may be paid toward acquisition of parkland in-lieu of parkland dedication; the amount of the in-lieu fee is dependent upon acquisition costs at the time of project approval. Chapter 17.32 of the City's Municipal Code also allows the developer to construct park improvements and receive credit for those improvements against payment of the required in-lieu fees or dedication of parkland.

The General Plan identifies several "park and open space deficiencies and opportunities," including the need for amenities at many existing, unfinished parks, the need for repair at many existing park facilities, and the trade-off between larger parks that are easier to maintain and smaller parks that are difficult to maintain but may be more accessible.

When preparing the recently adopted General Plan, several issues pertaining to park and recreation services were identified. These included the following points:

- The pace of park acquisition in recent years has not kept pace with the population increase, citing an increase in City-owned parkland between 1988 and 1997 of 1.63 acres per 1,000 population.
- The City's park dedication standards per 100 housing units, which are included in the Municipal Code, need to be updated to reflect the City's increased household size.
- Development of recreational facilities should be within walking distance of residences.
- A minimum of 5 acres of parkland for every 1,000 residents should be established as a ratio.

The following General Plan park-related goals and policies would apply to the proposed project:

GROWTH MANAGEMENT ELEMENT: OPEN SPACE, YOUTH AND RECREATION GOALS: PARKS AND RECREATION

Goals:

8-G-1 Develop a high-quality public park system for Pittsburg that provides varied recreational opportunities accessible to all City residents.

8-G-2 Provide parks that reflect the diversity of Pittsburg's natural setting, including creeks and waterways, tree stands, rock outcroppings, and topography.

Policies:

8-P-2 Pursue the development of park and recreation facilities within reasonable walking distance of all homes.

8-P-3 Develop public parks that are equitably distributed throughout the urbanized area, and provide neighborhood recreation facilities in existing neighborhoods where such facilities are presently lacking.

8-P-5 Maintain park and recreation facility standards for new development to serve both residents and employees, attainable through dedication of parkland or payment of in-lieu fees.

8-P-6 Revise the City's Park Dedication Ordinance to define useable area for parkland dedication requirements. Proposed park sites should be:

- Designed so that 80 percent of the site has slopes of less than 3 percent that are suitable for active recreational play;
- Sized according to the City's park standard of 5 acres per 1,000 residents;
- Available for year-round use, so that detention basins are not designated as parkland or shared park facilities; and
- A minimum of 2 contiguous acres in new residential neighborhoods.

8-P-11 Encourage dedication of fully developed parks rather than in-lieu fees. When in-lieu fees are collected, ensure that they are spent acquiring and developing new park sites or enhancing existing park facilities.

8-P-12 Ensure that all parks acquired through dedication are at least 2 acres in size within new residential development (target 5 acres). Accept smaller visual open space areas in new commercial and industrial development for parkland dedications.

8-P-13 Limit parkland dedications to flat, useable parcels within new residential neighborhoods. Ensure that such park sites provide open, grassy areas for informal recreational play (such as football or soccer).

8-P-14 Develop a maintenance-funding plan for all City Parks. Consider participation in parkland maintenance districts as a condition of development approval for new residential subdivisions.

8-P-20 Encourage new residential development in hillside areas to develop public trails and/or trailheads providing connections to other regional and local open spaces.

Performance Standards:

3-S-6 Provide a ratio of 5 acres of community and neighborhood parkland per 1,000 residents. Ensure that residential developers dedicate parkland in accordance with this standard.

3-S-8 Ensure that all new park sites consist of level, usable recreational space by requiring a minimum of 80 percent of the park site to have slopes of less than 3 percent.

3-S-9 Limit minimum park acreage dedications in new residential neighborhoods to generally no less than 2 acres.

The General Plan land use map also identifies a 5-acre neighborhood park within the Bailey Estates development.

Water Service

Water service in the City of Pittsburg is provided by the City's Water Department, which purchases most of its supply in the form of "raw" (untreated) water from the Contra Costa Water District's (CCWD) Contra Costa Canal, a component of the Central Valley Project (CVP). Most CVP water originates from the San Joaquin Delta, from which CCWD obtains its water through a contract with the U.S. Bureau of Reclamation (Reclamation). The project area would need to be approved by Reclamation as an inclusion to CCWD's contractual service area for the receipt of CVP water supplies. Reclamation would need to evaluate the inclusion application with respect to federal statutes and regulations, including the Endangered Species Act (ESA). Reclamation requires that the project proponent undertake ESA Section 10 consultation directly with the U.S. Fish and Wildlife Service and obtain either a Section 10 permit for each federally-listed species affected by the project or other ESA letter of clearance covering all such species for the CCWD. CCWD would include this information in the inclusion application to Reclamation. Upon Reclamation's approval, CCWD would issue a Confirmation Letter to the City of Pittsburg to provide CVP water to the project.

CCWD's Service Area C encompasses the current municipal boundaries of the City of Pittsburg, but it does not encompass the currently-unincorporated project site. In order to serve the site, Contra Costa Local Agency Formation Commission (LAFCO) must approve an extension of the CCWD service boundary to serve the site. In order to assure that: 1) CCWD's present and future customers within the CCWD planning area receive the intended Los Vaqueros Project benefits (i.e., high quality water with lower chlorides and water supply reliability) and 2) CCWD complies with all permit requirements related to the project, it is necessary to limit the additions to the Los Vaqueros Project service area. Therefore, CCWD must make the "de minimus" finding that the project, when considered cumulatively with other proposed or pending projects outside of the current boundaries of Service Area C, will not result in an increase of more than 5 percent above the amount of water supply identified in CCWD's 1996 Future Water Supply Study. The CCWD Confirmation Letter will address the "de minimis" finding as required in CCWD's Annexation and Water Service Regulations.

The City supplements water purchased from CCWD with a relatively small quantity of water from two groundwater wells located at City Park and at the intersection of Dover and Frontage Roads. The use of this well water, however, is limited due to infrastructure as well as environmental factors.

The City Water Department operates its own water treatment plant located at 300 Olympia Drive, treating approximately 16 to 18 million gallons per day (mgd). The treatment plant has a maximum capacity of 32 mgd. Treated water is distributed to customers through an approximately 122-mile system of pipes, utilizing pump stations to maintain flow and five City reservoirs which provide an approximate two-day emergency supply. The City is currently divided into six Pressure Zones, four of which are currently operational. The project site is located within Zones V and VI, which include the higher elevation properties in the City's southwest hills.

The City's Water System Master Plan[6] identifies existing deficiencies, provides proposed improvements to mitigate existing deficiencies, and recommends improvements to serve new development. It also provides a Capital Improvement Program (CIP) with a planning horizon year of 2020. Although Bailey Estates is outside of the City's Sphere of Influence, for planning purposes, the water demand of Bailey Estates was included in the forecast.

Regarding proposed Pressure Zones and water distribution facilities, the Water System Master Plan shows a proposed 1-million-gallon reservoir on the Smith property, approximately 500 feet north of Bailey Estates (elevation +880 feet). It is designated Pressure Zone VI, and 16-inch mains are indicated extending north from this reservoir to water distribution facilities in the existing Oak Hills subdivision and south to serve Bailey Estates. The service elevations for Zone VI are +649 to +776 feet.

Responding to changes in proposed land use conditions in the Southwest Hills area, the City of Pittsburg amended the Water System Master Plan in December 2001. Regarding Bailey Estates, the amendment states:

*"**Bailey Development.** The proposed 1.0 MG tank in Bailey's Zone VI could be connected to the City's transmission system at the following locations: 1) near the existing 1.75 MG Zone IV Oak Hills tank provided appropriate reimburse-ments are made; 2) near the proposed 3.0 MG Zone III Alves tank; or 3) to the proposed 24-inch transmission line at Bailey Road and West Leland Avenue."*

In summary, the 1-million-gallon Bailey Zone VI tank can be built on Bailey Estates and there are several connection options. The Master Plan indicates this reservoir would have a bottom elevation of +860 feet, an overflow elevation of +885 feet, and a hydraulic grade line (HGL) of +880 feet. Pressure reducing valves (PRVs) can be constructed at pressure zone interconnections, to allow conveyance from higher to lower pressure zones. If the reservoir is constructed on the Bailey Estates project, it can be anticipated that the City will require an easement to provide for future extension of water service to the Smith property. If the water main linking the proposed Bailey Estates reservoir with existing mains is constructed in the Bailey Road right-of-way, the main would require a diameter of 8 to 16 inches. At Leland Road, the existing main does not have capacity to serve both the Alves Ranch projects and Bailey Estates. This will necessitate extending a 16-inch-diameter main in the Leland Road right-of-way from the Bailey Road intersection to the City's water treatment plant (a distance of approximately 2 miles).

The following General Plan Water Service goals and policies would apply to the project:

GROWTH MANAGEMENT ELEMENT: WATER SERVICES

Goals:

11-G-1	Available water supply and distribution capacity should grow proportionally with development patterns and water usage trends. Update the City's Water Master Plan to implement General Plan growth projections.
11-G-2	Continue to implement water conservation policies to ensure adequate supplies of water in the future.

Policies:

11-P-1	Continue using the Urban Water Management Plan as the mechanism for detailed water supply planning, implementation, and conservation.
11-P-2	Implement, as needed, replacements and/ or expansions to the existing system of water mains through the City's Capital Improvement Program.
11-P-3	Continue water district and user conservation efforts to help reduce demand in light of recent Contra Costa Water District (CCWD) raw water reductions.
11-P-5	Work with CCWD in planning the development of new pressure zones as needed to ensure adequate fire flows in hillside areas.
11-P-7	Ensure that new residential, commercial, and industrial development equitably shares costs associated with providing water services to areas of urban expansion within the Planning Area.

11-P-9 Cooperate with CCWD to ensure compliance with District regulations and State law for new development requiring annexation to the CCWD service area. Cooperate with CCWD in processing all necessary information to allow a determination if Los Vaqueros facilities can be used to service new annexation areas.

11-P-10 Cooperate with federal agencies to ensure that new development requiring inclusion into the CCWD Central Valley Project contract service areas addresses all requirements of federal statutes and regulations, including the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA). Encourage project developers to provide all required information for consultation purposes, if necessary, under ESA sections 7 or 10, or a Habitat Conservation Plan.

Performance Standards:

3-S-10 Ensure that adequate water supply, quality, and distribution infrastructure will be available to serve all proposed development projects.

3-S-11 Provide an average of 180 gallons per capita per day (gpcd) of treated water per resident.

3-S-12 For fire flow demands, maintain water pressure at 20 pounds per square inch (psi).

Wastewater Service

Wastewater service in the City of Pittsburg is provided by the City and the Delta Diablo Sanitation District (DDSD). Although the City maintains and owns much of the local sewage collection system, the treatment of sewage for the project site, after it is annexed to the City and to the DDSD service area, would be handled by the DDSD treatment facility located just north of the Pittsburg-Antioch Highway at the border of the City of Pittsburg and the City of Antioch. DDSD's service area includes all of Pittsburg but does not currently encompass the project site. As indicated in the project description, annexation of DDSD service area boundaries to encompass the project site will be subject to approval by the Contra Costa Local Agency Formation Committee (LAFCO).

The General Plan Update identifies potential future deficiencies in the existing wastewater collection system by 2005, including a projection that 10 percent of the City's total wastewater collection system, mostly in the portion of the system south of SR4 that would serve the project site, "will not have adequate capacity to carry these projected buildout design flows." The General Plan Update also identifies deficiencies "in the capacity, safety and reliability of existing sewer lift stations."[7]

The City's Wastewater Collection System Master Plan (2003) and Capital Improvement Program (CIP), and the DDSD Conveyance and Treatment System Master Plans, identify the measures necessary to ensure that the wastewater collection system will be able to adequately handle buildout wastewater flows. Briefly summarized, the Collection System Master Plan has identified predicted capacity deficiencies in the trunk sewer system that parallels SR4 (from Bailey Road to the PG&E easement, located 6,500 feet to the east). Additionally, the existing Bailey Road 8-inch line that extends from West Leland Road to the SR4 trunk sewer main needs to be upgraded. The Collection System Master Plan examined alternatives and ultimately concluded that the most viable and least expensive solution was to 1) replace the existing 12-inch trunk sewer main with a 15-inch main

(6,500 linear feet); and 2) add a parallel 8-inch main in Bailey Road from West Leland Road to the intersection with the trunk sewer (475 linear feet). The estimated costs of these projects is $1.982 million and $0.246 million, respectively. They are projects at the top of the CIP prioritization for funding. The trunk sewer improvement is contingent on 100 units of additional growth in the southwest portion of the City. The Bailey Road improvement is contingent on the development of the Bailey Estates and Smith parcels.

The following General Plan Growth Management and Wastewater Service policies would apply to the project:

GROWTH MANAGEMENT AND PUBLIC FACILITIES ELEMENTS: WASTEWATER SERVICES

Goals:

11-G-3 Plan for expansion of the City's wastewater collection system, in order to provide necessary infrastructure for projected urban growth through 2020.

Policies:

11-P-12 Pursue replacement and/ or expansion of the City's trunk sewer system, as demand increases, particularly in newer portions of the system south of State Route 4.

11-P-15 Work with Delta Diablo Sanitation District (DDSD) to promote the use of recycled water for irrigation of large planted areas, such as business/ industrial campus projects, City parks, and street medians.

11-P-18 Ensure that new residential, commercial, and industrial development equitably share costs associated with providing wastewater services to areas of urban expansion within the Planning Area.

Performance Standards:

3-S-13 Ensure that adequate sewage collection, transfer, and treatment facilities will be available to serve all proposed development projects.

3-S-14 Design and construct sewer mains to act at 60 percent capacity, and trunklines at 100 percent capacity.

Power Service and Supply

Power service to the project site is provided by Pacific Gas and Electric Company (PG&E), which owns the local natural gas and electricity distribution system. With the deregulation of the power industry begun by the California Public Utilities Commission (CPUC) in 1992 and supported by the state legislature with the passage of Assembly Bill 1890 and Senate Bill 90, PG&E has sold most of its power plants. As a result, PG&E no longer has control of the power supply within its service area, although the California Public Utilities Commission continues to regulate the prices charged for energy by PG&E.

Under deregulation, the California Independent System Operator (Cal-ISO) was created to ensure that "energy reaches its destination safely and reliably."[8] Cal-ISO controls access to the power grid, allowing energy providers (i.e., owners of power plants and other sources of electric power) to utilize the state's power distribution system, and regulating the distribution of that power to energy users. Cal-ISO is regulated by the Federal Energy Regulation Commission.

The California Energy Commission (CEC) is the state's "primary energy policy and planning agency" and is responsible for "forecasting future energy needs" and "planning for and directing state response to energy emergencies."[9] The CEC has concluded that "if eleven large power plants are put into service between 2001 and 2003, there would be more generation available than load growth requires over most of the ensuing decade."[10] According to staff at the State of California Office of Planning and Research, the CEC has authorized the construction of the power plants determined necessary to provide adequate power by 2003.[11]

The General Plan does not contain policies related to power service.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with the provision of public services and utilities. CEQA Guidelines (2003) define a significant impact upon public services as one that would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police and fire protection, schools, parks or other public facilities. CEQA Guidelines also define a significant impact on utilities service systems as one that would:

- exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;
- comply with federal, state, and local statutes and regulations related to solid waste.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Fire Protection Service

IMPACT 4.7-1: The project site is located outside of the 1.5-mile response radius for either of the two nearest fire stations. This is considered a *significant and unavoidable* impact.

The fire service response time between the nearest fire station and the project site is estimated to be 9 to 10 minutes, in excess of the maximum response time specified by the General Plan and the CCCFPD. However, General Plan Policy 11-P-28 encourages the City to work with the Fire District to obtain a new fire station or relocate existing Fire Station 86 to a site south of SR 4 and west of Bailey Road. Depending upon the ultimate location of the new or relocated station, the project site would be either partially or completely within the district's 1.5-mile response radius. General Plan standard 3-S-3 also calls for the City to ensure that the Fire District can maintain a 5-minute response time for 90 percent of emergency calls. The location of the project site is not contrary to this adopted standard, for although the project site is currently outside the 5-minute response radius, the majority of the City (i.e., more than 90 percent) will be within a 5-minute response radius.

❑ **MITIGATION MEASURES:**

4.7-1A: All project roadways shall be a minimum of 36 feet in width for double-loaded streets and 28 feet for single-loaded streets, shall be able to support 37 tons of weight, shall not exceed 16 percent grade, and shall have vertical clearance of at least 13'6".

4.7-1B: The developer shall provide a minimum fire flow of 2,000 gallons per minute (gpm) for a minimum of two hours, and shall provide adequate fire hydrants in compliance with CCCFPD standards.

4.7-1C: All homes shall have not less than Class "A" fire-rated roof assembly.

4.7-1D: All homes shall be equipped with fire sprinklers.

4.7-1E: The developer shall install in all houses an in-home emergency response system with direct connection to emergency administration centers.

4.7-1F: Only fire-resistant exterior building materials shall be used, e.g., stucco surfaces and tile roofs.

4.7-1G: The developer shall pay the Contra Costa County Fire Protection District's impact fee (currently $235 per dwelling unit) at the time of building permit issuance to mitigate the increase in demand for services created by the project.

4.7-1H: In a deed disclosure, the developer shall notify all property owners/buyers that the site is currently outside the 5-minute fire department response time radius specified by the General Plan.

IMPACT 4.7-2: The project would create a new urban/rural interface located within the City's Southwest/South Hills planning area, thereby placing houses in close proximity to an area of high fire danger. This is considered a *significant and unavoidable* impact.

The project site is surrounded by hillside grasslands which have been identified in the General Plan and by the CCCFPD as an area of high fire danger. Activity at the project site, both during construction and after the site is occupied, could increase the possibility of a wildland fire in this area. The location of the project homes in close proximity to these hillside areas would also expose humans to the risk of wildland fires.

❑ **MITIGATION MEASURES:**

4.7-2A: In addition to the measures required by Mitigation Measure 4.7-1, the applicant/developer shall submit prior to commencement of grading for the project a *wildland fire suppression plan* subject to City and CCCFPD approval that, at a minimum, incorporates the following measures:

- a weed abatement program consistent with CCCFPD policy and the Contra Costa County Weed Abatement Ordinance for open space within the project;
- operable fire hydrants at the project site prior to building construction;
- a plan for provision of emergency vehicle access (EVA) into the surrounding open space area; and
- a requirement that the developer use only fire-resistant building materials on exterior surfaces of all residential buildings (e.g., stucco walls, tile roofs).

4.7-2B: Prior to issuance of the first residential building permit, provide details on implementation of the wildland fire suppression plan, including:

- proposed building materials;
- evidence of operable hydrants;
- evidence of an EVA to the surrounding open space;
- evidence of implementation of the weed abatement program; and
- identification of the entity to maintain safety improvements within the project open space and an adequate funding source.

Even with implementation of Mitigation Measures 4.7-1A through 4.7-1H and Mitigation Measures 4.7-2A and 4.7-2B, this impact remains *significant and unavoidable.*

Police Protection

IMPACT 4.7-3: The project adds to the law enforcement responsibility of the Pittsburg Police Department. Without the addition of two sworn officers, the project will adversely impact compliance with General Plan Policy 10-P-39. This is considered a *significant and unavoidable* impact.

The residents of Bailey Estates will pay property tax and sales taxes to the City, but there is no direct linkage to assure that the number of sworn officers in the Police Department will keep pace with the growth of population in the City. The Initial Study (Appendix A) assumed an occupancy factor of 3 persons per dwelling in Bailey Estates. For the 319-unit Project, this translates to a population of 957 persons. At a ratio of 1.8 sworn officers per 1,000 population, the project implies a demand of 1.75 new sworn officers in the department.

The City of Pittsburg currently does not maintain a ratio of 1.8 sworn officers per 1,000 population. Since no mitigation is available at this time, this remains a *significant and unavoidable* impact.

❑ **MITIGATION MEASURE:** No mitigation is available.

IMPACT 4.7-4: The project site may be located outside the Police Department's range for radio reception.

Discussions with the City's Police Department representative[12] indicated that radio reception is poor when responding to calls in the south hills area. Although there would be no problem in serving the project site, the Department may require a new repeater so that patrol units can receive calls when on patrol in the project site. Recent improvements to the system may have eliminated the radio communication "gaps."

- ❑ **MITIGATION MEASURE 4.7-4:** Should police radio coverage of the site be determined by the City to be inadequate, the developer shall install a communications antenna or other equipment at a location determined by City staff to provide adequate reception within the project area. The required communication-related improvement shall be installed prior to issuance of a certificate of occupancy for any dwelling within the project that is outside of radio range, unless the Police Department determines the additional communication equipment is unnecessary because the City's expanded communication system is fully operational and can provide adequate coverage to the entire project area. If the antenna/facility location is off site, the City shall obtain the necessary easements for its installation.

Schools

IMPACT 4.7-5: The project would result in approximately 239 new students enrolled within the Mount Diablo Unified School District, increasing the demand for school services.

The project is estimated by the School District to result in a total new enrollment of 239 students, including 112 new elementary school students, 62 new middle school students, and 65 new high school students. Assuming no other new development, and without the construction of the San Marco Elementary School, the project would result in insufficient capacity at Bel Air and Riverview schools, as shown in Table 4.7-1.

The General Plan Final EIR identifies that, under the General Plan year 2020 buildout scenario, mitigation is necessary to accommodate residential development-related enrollment within the portion of the City served by the Mount Diablo Unified School District (Impacts 4.6-a and 4.6-b in the Pittsburg General Plan). In addition to general enrollment impacts, the EIR specifically states that "new development may generate additional high school enrollment beyond current capacity." The EIR specifically identifies the necessity for a new high school and specifies the following mitigation measures:

Table 4.7-1
School Capacities

School	Capacity	Current Enrollment*	Project-related Enrollment	Enrollment with Project	Insufficient Capacity
Bel Air Elementary	702 students	697 students	112 students	809 students	Over capacity by 107 students
Riverview Middle School	893 students	986 students	62 students	1,048 students	Over capacity by 155 students
Mount Diablo High School	1,769 students	1,671 students	65 students	1,736 students	None
Total	3,412 students	3,354 students	239 students	3,593 students	Over capacity by 181 students

* As of October 2002.

Source: Mount Diablo Unified School District, May 2001 and July 2003.

8-P-29: Work with Mount Diablo Unified School District to ensure that the timing of school construction and/or expansion is coordinated with phasing of new residential development. (The EIR lists school expansion, as well as the construction of the San Marco Elementary School, as *"options for providing adequate school facilities for future residents."*)

8-P-31: As part of development review for large residential subdivisions (greater than 100 units), evaluate the need for new school sites. If needed, encourage subdivision design to accommodate school facilities and cooperate with the school districts in acquisition of those sites.

2-P-98: Support efforts by Mount Diablo Unified School District to establish a public high school in Bay Point.

8-P-30: Designate adequate land area within MDUSD boundaries for the construction of a new high school facility.

The District, in response to the Notice of Preparation, has stated that a school site should be considered within the project. Albeit, new schools are required to meet the increase in enrollment, it is unreasonable to require this project to dedicate a site given the location of the development at the edge of the City limits and the topographic constraints, both on- and off-site. The applicant will be required to contribute school impact fees to help offset the cost of new school construction.

❑ **MITIGATION MEASURE 4.7-5:** The applicant shall pay the District's school impact fee.

If buildout of the project precedes construction of the school campuses in the San Marco and proposed Alves Ranch developments, the project in the short-term would still worsen the existing problem of overcrowding at the Bel Air and Riverview campuses. However, in accordance with California Government Code Section 65996, payment of fees is the exclusive method of mitigating impacts to schools that may be affected by this project.

Park/Recreational Services

IMPACT 4.7-6: An increased demand for park services would occur with implementation of the project.

The project-related increase in population will increase demand on the City's parks and park services, and the distance between the project site and existing City parks exceeds the General Plan-prescribed minimum of one-quarter mile for mini-parks and one-half mile for neighborhood parks.

The General Plan Land Use Map calls for a park facility on the project site. The project does not include an on-site park. If a park is not included in the development proposal, the applicant will be required to seek a General Plan Amendment.

❑ **MITIGATION MEASURE 4.7-6:** The applicant shall redesign the project plan to incorporate a public park that is sized according to the General Plan park standard of 5 acres per 1,000 residents, and in compliance with the minimum park dedication area specified by the Pittsburg Municipal Code, or provide in-lieu fees, improvements to dedicated land, and/or a combination thereof.

Park amenities would be specified by the City of Pittsburg at the time of final map review, and may include sports courts (such as tennis, volleyball and/or basketball courts), facilities intended to serve small children (tot lot equipment), turf areas, picnic areas, and restroom facilities.

Water Supply

IMPACT 4.7-7: The project would increase demands on the municipal water supply and would require the need for an adequate water supply.

Using a generation factor of 540 gallons per day per unit (180 gpd x 3 persons/unit) as specified in the General Plan, the project would be anticipated to result in an increased water demand of approximately 172,260 gpd. Based on information provided by CCWD and contained within the Draft EIR for the General Plan, in "normal" (non-drought) years, and under cumulative buildout conditions, CCWD would be able to provide the necessary additional water for the project.[13] However, during drought years CCWD may not be able to provide the City's water department with the raw water to meet all of the City's needs under buildout conditions.

As indicated above, the project site is not within the contractual service area of the Central Valley Project (CVP), which is the major water supply source for the CCWD. The CCWD Future Water Supply Study[14] indicates a projected ultimate water demand in Service Area A of 202,400 acre-feet per year by 2040. The existing demand for CCWD water is approximately 169,900 acre-feet per year. The projected water demand of 161 acre-feet for the proposed project would represent .09 percent of the total demand. As indicated in the City's General Plan Update, the proposed project site is located within the nine areas currently outside the Los Vaqueros Project (LVP) planning area. The total projected demand for these nine areas ranges from 2,925 to 3,450 acre-feet per year or 1.47 to 1.68 percent[15] of the LVP critical year buildout demand. The demand, when combined with other known projects, currently falls within the acceptable 5 percent deviation as called for in the LVP EIR/S (1993). The District would issue a "de minimus" determination if the proposed project's water demand is less than the 5 percent deviation.[16]

The availability of the water supply is also constrained by a "Biological Opinion" issued for CCWD by the U.S. Fish and Wildlife Service (USFWS) in 1993 which states that the Bureau of Reclamation, the agency which supplies CCWD with its supply of water, must determine that any expanded CCWD service territory would not result in development that would harm a federally-listed species. The District will utilize the biological study conducted for this EIR (Section 4.8) in preparing the necessary documentation to ensure that the Bureau of Reclamation approves the inclusion for a CVP water supply. In addition, the applicant will be required to complete the consultation and permitting process under the state and federal Endangered Species Acts.

All of the following mitigation measures are required to reduce water supply impacts to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.7-7A: The project applicant shall submit information to the CCWD necessary to complete the District's inclusion request to the Bureau of Reclamation to specifically add the Bailey Estates project site to the CVP contractual service area.

4.7-7B: The applicant shall submit written evidence to the City of CCWD's ability to supply the project based on Reclamation approval of expansion of the CVP contractual service area to include the project site, or establishment of an adequate supply of City well water, prior to City approval of a Final Subdivision Map for the project.

4.7-7C: To promote water conservation, the applicant shall incorporate drought-tolerant landscaping and water-efficient irrigation systems throughout the subdivision, and shall install in the houses low-flow toilets and water-efficient appliances.

Water Treatment

IMPACT 4.7-8: The project would place increased demands on the existing water conveyance and treatment system within the City of Pittsburg.

The nearest water main to the project site is a 12-inch main located within the Bailey Road right-of-way at the entrance to the Oak Hills subdivision. If connection to this line is not available for use by the project, a new water main between the project site and the nearest City main will be required. It is anticipated that this will involve extending the project main from the Bailey Road / West Leland Road intersection easterly to a connection point east of the Pittsburg Delta View Golf Course. The project will also need to incorporate on-site water storage to provide adequate water pressure to meet minimum fireflow requirements. The applicant has indicated a water tank would be located in the northwest corner of the project site. (Refer to location of tank in Figure 4.2-6.)

All of the following mitigation measures would be necessary to reduce water conveyance and treatment impacts to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.7-8A: Prior to issuance of an Engineering permit to construct subdivision improvements, the applicant shall provide the following:

- Proof of the "de minimus" finding by the Contra Costa Water District; and
- A plan for water facilities improvements to serve the project. This plan shall be subject to review and approval by the City Engineer.

4.7-8B: Prior to issuance of a building permit for the first residence, the developer shall construct and have operational the following:

- Adequate water facilities, acceptable to the City Engineer; and
- The necessary on-site water storage infrastructure (such as a water tank or reservoir) to provide adequate water pressure for residential and fireflow use (minimum fireflow being 2,000 gpm for a duration of at least two hours) in accordance with Contra Costa County Fire Protection District standards.

Wastewater Collection

IMPACT 4.7-9: The project would result in an increased demand on the wastewater collection system.

Based on the General Plan and Delta Diablo Sanitation District (DDSD) prescribed generation factor of 220 gpd for each single-family residential unit, the project would be anticipated to result in an average increased wastewater flow of 70,180 gpd. To reach the DDSD treatment plant in Antioch, wastewater would flow through collection systems (sewer main/trunk lines and lift stations) within the City of Pittsburg that are maintained by the City Public Works Department, and through conveyance systems that are maintained by DDSD.

The nearest sewer main to the project site is an 8-inch-diameter line within the City of Pittsburg at the Bailey Road / West Leland Road intersection. This portion of the City's trunk sewer system is inadequate to service projected wastewater flows within the City under cumulative buildout conditions (including buildout of the project site). The EIR for the Pittsburg General Plan includes a mitigation measure (11-P-10) to address these projected capacity deficiencies: "Pursue replacement and/or expansion of the City's trunk sewer system, as demand increases, particularly in newer portions of the system south of State Route 4."

The conveyance system for the City of Pittsburg (pump stations and force mains) has been analyzed and found to be adequate to serve the ultimate service area.[17] DDSD has developed a capital improvement program to plan for the District's expansion needs. DDSD ordinances require that new development fund necessary expansion facilities through the payment of connection and development fees.

All of the following mitigation measures are necessary to reduce wastewater conveyance impacts to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.7-9A: Prior to issuance of the first residential building permit for the project, the applicant shall install the wastewater infrastructure needed to serve the project, subject to review and approval of the Public Works and Engineering Departments. Specific requirements are as follows:

- Install a sewer main from the project site to hook-up with the existing main located at the intersection of West Leland Road and Bailey Road; and
- Contribute a fair-share amount toward the construction of necessary trunk line improvements within the City necessary to meet projected demand under General Plan buildout conditions.

4.7-9B: To adequately provide wastewater conveyance within the DDSD collection system, the applicant shall pay the DDSD conveyance system fee (currently $245 per single-family unit).

Wastewater Treatment

IMPACT 4.7-10: The project would result in increased wastewater treatment demand.

Based on the General Plan and DDSD-prescribed generation factor of 220 gpd for each single-family residential unit, the project would be anticipated to result in an average increased wastewater flow of 70,180 gpd. The DDSD treatment plant that would serve the site has a current capacity of 16.5 mgd average dry weather flow, whereas the annual average dry weather flow in 2000 was 13.4 mgd. For this treatment plant, the existing Wastewater Treatment Master Plan projects a year 2005 treatment demand, under cumulative buildout conditions, of 14.75 mgd and a year 2010 treatment demand of 16.02 mgd. DDSD plans to expand the treatment plant to meet the projected 2010 demand.[18]

❑ **MITIGATION MEASURE 4.7-10:** The applicant shall be subject to a DDSD connection fee to defray future wastewater treatment plant expansion costs (this fee is currently $3,000 per unit).

Work with Road Right-of-Ways

IMPACT 4.7-11: The project is anticipated to result in placing water and sewer mains in road right-of-ways, which can present traffic safety issues, as well as road capacity and geotechnical issues.

Available information at this time indicates that water and sewer mains will be placed in the Bailey Road right-of-way, between the site and West Leland Road, and main extensions may be required from that intersection to the north and/or east to connect to adequate facilities.

❑ **MITIGATION MEASURE 4.7-11:** The applicant shall obtain an encroachment permit for all work performed in road right-of-ways. The application for the permit shall be subject to review and approval by the City Engineering Department and shall incorporate traffic control plan (TCP) measures consistent with City Engineering Department guidelines, which include but are not limited to the following:

- Lane closures scheduled outside of weekday peak hour commute travel times;
- Details of measures for traffic safety (including flagging traffic, flashing arrow signs, and a performance standard for street sweeping);
- Special measures for work at intersections and in front of driveways to minimize disruptions;
- Measures for protection of work areas left open overnight;

- Geotechnical criteria for backfilling trenches, base rock and pavement; and
- Provision of safe pedestrian and bicycle access through or around the construction area.

Power Supply Demand

IMPACT 4.7-12: The project would create a demand for power. This is considered a *less-than-significant* impact.

As discussed in the Setting section, by year 2003 power will be available to more than adequately supply local growth with the eleven power plants put into service. Furthermore, the new houses will be equipped with the latest energy-conserving appliances to help reduce the demand. Thus, the demand on the power supply is considered to be less than significant.

❑ **MITIGATION MEASURE 4.7-12:** No mitigation is required.

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[1] Response time goal from City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001. Response time estimate from Richard Ryan, Fire Inspector, CCCFPD, personal communication, April 2001.

[2] Sergeant Calia, Pittsburg Police Department, personal communication, May 2001.

[3] Ibid., December 2001.

[4] Correspondence from Richard Nicoll, Assistant Superintendent, Mount Diablo Unified School District, May 2, 2001. The School District uses a student generation factor of 0.75 students per single-family house for all grade levels.

[5] Richard Nicoll, Assistant Superintendent, Mount Diablo Unified School District, personal communication, April and May 2001.

[6] Carollo Engineers, 2000 (Amendment #1 in December 2001), *Water System Master Plan, August 2000.*

[7] *Pittsburg General Plan Update: Existing Conditions and Planning Issues*, City of Pittsburg, June 1998, page 215.

[8] Official website, California Independent System Operator.

[9] Official website, California Energy Commission.

[10] California Energy Commission, "Market Clearing Prices Under Alternative Resource Scenarios 2000 to 2010," March 13, 2000, executive summary.

[11] Brian Grattidge, Associate Planner, State of California Office of Planning and Research, personal communication, April 2001.

[12] Op. cit., Calia, personal communication, December 2001.

[13] *Draft EIR for the City of Pittsburg General Plan*, pages 4-74, 4-75 and 4-78. Dennis Pisila, Contra Costa Water District, personal communication, April 2001.

[14] Contra Costa Water District (CCWD), *Final Report, CCWD Future Water Supply Study*, August 1996.

[15] Dennis Pisila, CCWD, personal communication, September 2002.

[16] City of Pittsburg Draft General Plan, Part I: Text Revisions to the Draft General Plan, June 2001.

[17] Amanda Wong, Assistant Engineer, Delta Diablo Sanitation District, personal communication, May 2001.

[18] Amanda Wong, DDSD, personal communication, April 2001.

4.8 BIOLOGICAL RESOURCES

Background and Methodology

Biological resources were identified through the review and compilation of existing information, a peer review of detailed surveys conducted by the applicant's biological and wetland consultants, and a field reconnaissance survey of the site. Detailed surveys and assessments conducted by the applicant's consultants included: a *Biological Assessment*[1]; a *San Joaquin Kit Fox Early Evaluation Report*[2]; a *Burrowing Owl Survey*[3]; a *Jurisdictional Delineation*[4]; an update of the jurisdictional delineation[5]; an *Alternatives Analysis under Section 404(b)(1) of the Clean Water Act*[6]; a Mitigation Agreement between the applicant and the California Department of Fish and Game (CDFG) addressing mitigation for impacts to California tiger salamander[7]; and reports summarizing the results of surveys for special-status plant species conducted in spring and summer of 2001.[8]

A field reconnaissance survey of the site was conducted on May 9, 2001, by the EIR biologist to confirm existing vegetative cover and wildlife habitat, potential for occurrence of special-status species, and presence of any sensitive biological resources such as wetlands, sensitive natural communities, or mature native trees. The following provides a summary of biological and wetland resources on the site, an assessment of the potential affects of proposed development, and measures to mitigate impacts on sensitive resources.

Setting

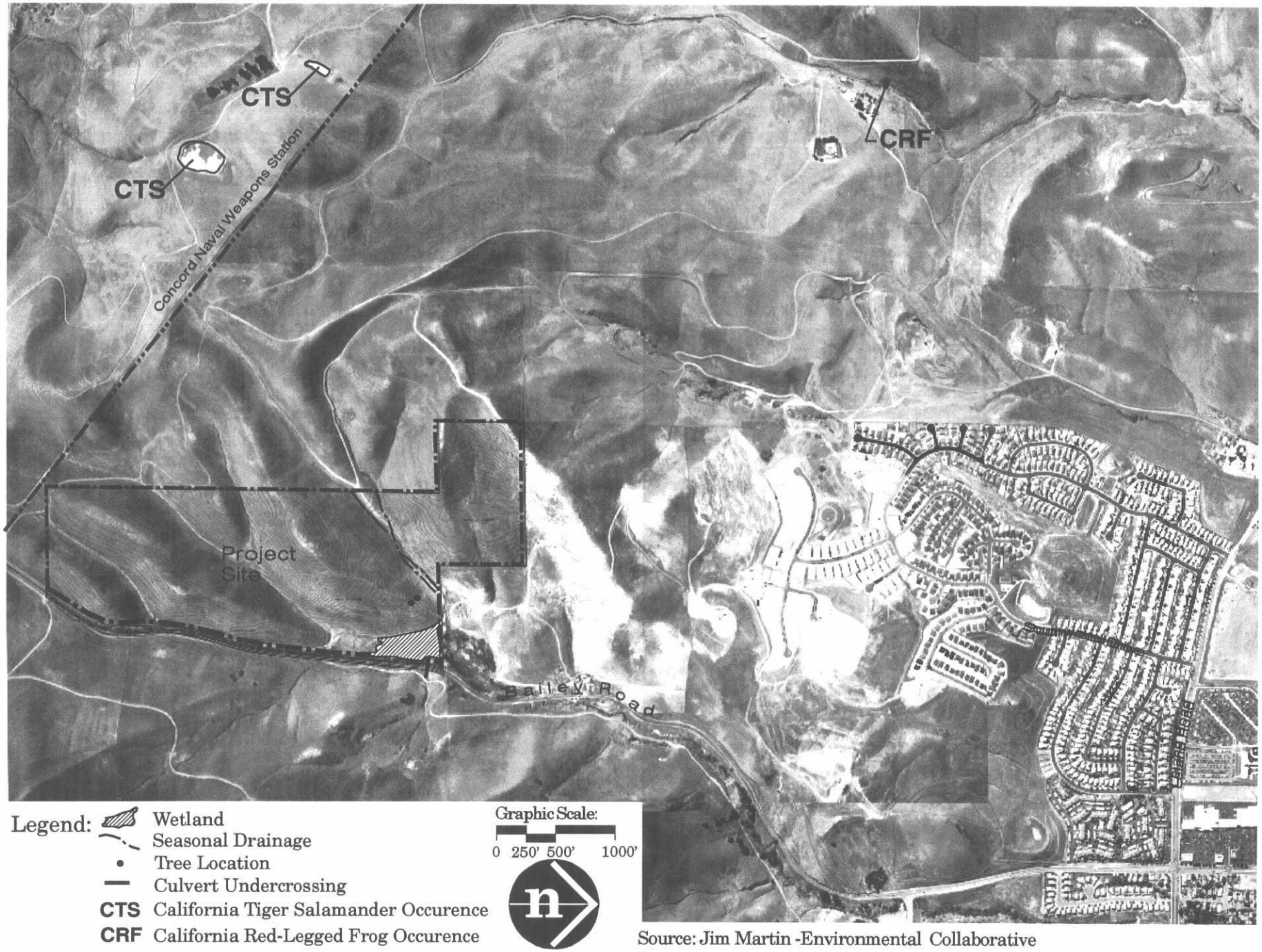
Vegetation and Wildlife Habitat

Vegetative cover on the site has been altered by historic overgrazing, and is now dominated by non-native annual grassland characteristic of the rolling hills of northeast Contra Costa County. A large complex of wet meadow and freshwater marsh occurs along the headwaters of Lawlor Creek in the northeastern portion of the site. Two native California buckeye trees (*Aesculus californica*) occur along the north-facing slopes in the northern drainage. Figure 4.8-1 provides an indication of the extent of grassland and other features in the project vicinity.

Historic overgrazing has limited regeneration of native trees, suppressed the growth of riparian vegetation and other native cover, and degraded the condition of the seeps and drainages on the site. However, the extent of undeveloped land and restricted human access contribute to the value of the area for wildlife. Most of these are dependent on grassland habitat, with others specifically associated with the aquatic habitat of the wet meadow and freshwater marsh.

Non-native Grassland

Most of the site is dominated by a cover of non-native grassland, although some native species continue to occur in the grasslands, particularly on the steeper slopes. Common species in the grasslands include: wild oat (*Avena fatua*), hare barley (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Lolium multiflorum*), brome (*Bromus* spp.), red-stemmed filaree (*Erodium cicutarium*),



Source: Jim Martin -Environmental Collaborative

Figure 4.8-1 Biological Resources Map

colchita (*Lotus humistratus*), bur clover (*Medicago polymorpha*), bindweed (*Convolvulus arvensis*), vetch (*Vicia* sp.), and yellow star thistle (*Centaurea solstitialis*), all non-native species. A few native species remain in the grassland, including lupines (*Lupinus* spp.), snakeroot (*Sanicula crassicaulis*), purple owl's clover (*Castilleja exerta* ssp. *exerta*), harvest brodiaea (*Brodiaea elegans*), fiddleneck (*Amsinkia menziesii* var. *menziesii*), and California poppy (*Escholzia californica*).

Many species of wildlife use the grasslands for foraging and breeding, such as pocket gopher, California vole, California ground squirrel, western meadowlark, Brewer's blackbird, burrowing owl, savannah sparrow, western fence lizard, and gopher snake. A number of predatory birds and mammals rely on the small mammals and birds of the grasslands as an important source of prey. These include: golden eagle, American kestrel, red-tailed hawk, great-horned owl, prairie falcon, red fox, gray fox, American badger, and coyote. The expanse of grasslands in the area contributes to the importance of this habitat type to large mammals and raptors, which are able to forage in the grasslands because of the limited human activity. Fencing along the boundaries of the Concord Naval Weapons Station and portions of the Keller Landfill does inhibit movement of larger land-motile species. The scarcity of dense vegetation on the site and surrounding lands magnifies the importance of the scrub and limited tree cover to dependent wildlife. The trees provide a source of forage as seeds mature, and are also used for perching, roosting, and possible nesting locations.

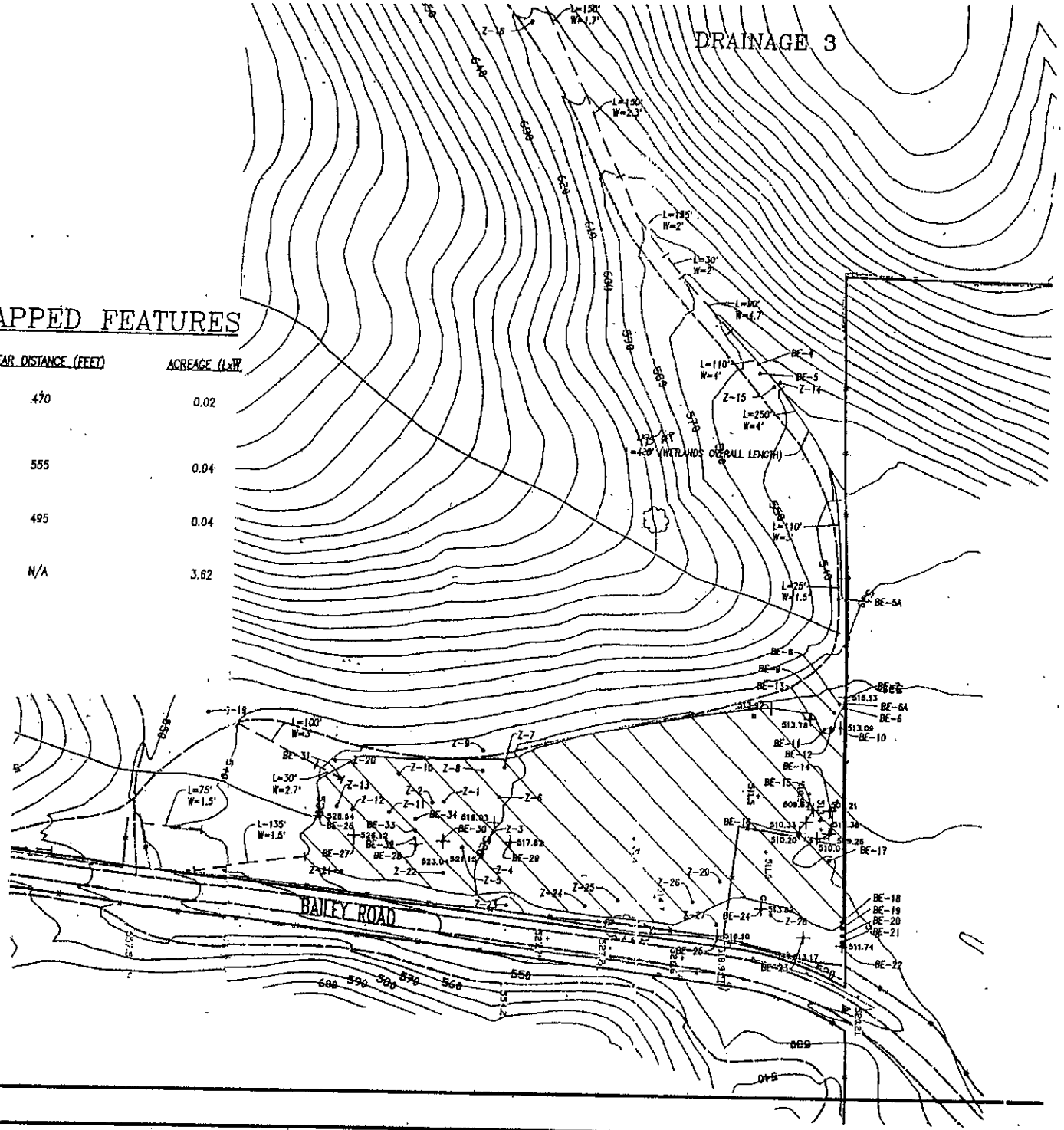
Marsh, Seeps and Aquatic Habitat

Based on an updated Jurisdictional Delineation, freshwater marsh and seeps occupy 3.62 acres on the valley floor of the main drainage in the northeastern portion of the site (see Figure 4.8-2). This wetland complex supports a cover of perennial species such as Mexican rush (*Juncus mexicus*), cattail (*Typha* sp.), hare barley (*Hordeum leporinum*), Bermuda grass (*Cynodon dactylon*), watercress (*Rorippa nasturtium-aquaticum*), brass buttons (*Cotula coronopifolia*), rabbitsfoot grass (*Polypogon monspeliensis*), spiny cocklebur (*Xanthium spinosum*), loosetrife (*Lythrum hyssopifolia*), and curly dock (*Rumex crispus*).

Aquatic habitat on the site includes the seeps and freshwater marsh in the wet meadow, and the seasonal drainages. A functional windmill pumps water into an existing tank at the west edge of the wet meadow, which overflows and provides perennial flows into the wetland habitat. The volume of surface water precludes access by cattle during the winter and spring, but eventually most of the freshwater marsh cover is trampled and grazed by late summer. Heavy cattle activity severely degrades the condition of the wet meadow and seasonal drainages. Species associated with the freshwater marsh complex include: red-winged blackbird, western toad, pacific tree frog, and possibly special-status species such as California tiger salamander, California red-legged frog, and western spadefoot toad.

ACREAGE OF MAPPED FEATURES

CATEGORY	LINEAR DISTANCE (FEET)	ACREAGE (LxW)
DRAINAGES 1 & 2 DRAINAGE FEATURES (OTHER WATERS OF THE U.S.)	470	0.02
DRAINAGE 3 – DRAINAGE FEATURES (OTHER WATERS OF THE U.S.)	555	0.04
WETLANDS IN DRAINAGE 3 (WATERS OF THE U.S.)	495	0.04
WETLANDS (WATERS OF THE U.S.)	N/A	3.62



Scale as shown

Source:

Figure 4.8-2 Jurisdictional Wetland

Special-Status Species

Special-status species[1] are plants and animals that are legally protected under the state and/or federal Endangered Species Acts[2] or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the Endangered Species Acts often represent major constraints to development, particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take"[3] of these species.

A number of special-status plant and animal species are known from or suspected to occur in the open hillsides of northeast Contra Costa County. These include several with legal protective status under the state and federal Endangered Species Acts such as San Joaquin kit fox, California red-legged frog, and Contra Costa goldfields (*Lasthenia conjugens*), and additional species with candidate and other protective status such as golden eagle, burrowing owl, white-tailed kite, prairie falcon, peregrine falcon, California tiger salamander, western pond turtle, Congdon's tarplant (*Hemizonia parryi* ssp. *congdonii*), fragrant fritillary (*Fritillaria liliacea*), and recurved larkspur (*Delphinium recurvatum*).

Detailed surveys have been conducted to determine presence or absence of any special-status plant species on the site. Surveys were conducted by a qualified botanist on March 28, May 8, and July 19, 2001, during which time plants were identified to the degree necessary to determine possible

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[1]Special-status species include: designated rare, threatened, or endangered and candidate species for listing by the CDFG; designated threatened or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS); species considered rare or endangered under the conditions of Section 15380 of the *California Environmental Quality Act Guidelines*, such as those plant species identified on lists 1A, 1B and 2 in the *Inventory of Rare and Endangered Plants of California*; and possibly other species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on list 3 in the California Native Plant Society *Inventory* or identified as California Special Concern species by the CDFG.

[2]The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

[3]"Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFG also considers the loss of listed species habitat as take, although this policy lacks statutory authority and case law support under the CESA.

rarity.[9] No special-status plant species were detected or are believed to occur on the site based on the results of the detailed surveys. The EIR biologist concurs that the survey effort for special-status plant species was adequate and that no additional surveys are considered necessary.

Table 4.8-1 identifies special-status animal species known or suspected from the southern Pittsburg vicinity. Detailed surveys have been conducted by the applicant's consulting biologist, Ibis Environmental Services (IES), addressing the potential for occurrence of San Joaquin kit fox,[10] California red-legged frog, California tiger salamander,[11] and burrowing owl.[12] Of these, the known occurrence of California tiger salamander appears to represent the largest constraint and resource of greatest concern. Trapping and relocation of adult California tiger salamander conducted for the past three years indicate that a high number of individuals occur within the site, particularly through the central seasonal drainage swale. It is unclear whether attempts to relocate these individuals will be successful, or what effect proposed development may have on migration activities. Following the first year of trapping and relocation conducted in the fall and winter of 2000/2001, the CDFG requested additional trapping and relocation for the past two years because of the high number of individuals encountered on the site.

Based on the *Early Evaluation Report* by IES,[13] San Joaquin kit fox is not expected to occur in the site vicinity. The site is located approximately five miles northwest of the closest sighting of San Joaquin kit fox which was from the vicinity of Black Diamond Mines Regional Preserve. Obstacles and restrictions to movement in the Bailey Road vicinity include chain-link fencing around the Keller Landfill property and the Concord Naval Weapons Station.

Another species of possible concern to the USFWS is California red-legged frog. The *Biological Assessment* by IES[14] concludes that suitable breeding habitat for California red-legged frog is absent from the site, but that the wet meadow and other areas provide potential dispersal, foraging, and estivation habitat. There are several documented occurrences of California red-legged frog within five miles of the site, including one just over one-half mile to the southwest on the Concord Naval Weapons Station land. One California red-legged frog was trapped at the western edge of the site during the California tiger salamander trapping and relocation effort in the winter of 2001.

Several special-status birds have varying potential to occur on the site. Most of these may occasionally forage in the grasslands of the site vicinity. However, nesting habitat is generally absent for most of these species, including those with legal protective status such as golden eagle and peregrine falcon. Exceptions to this are burrowing owl, loggerhead shrike, horned lark, and white-tailed kite. Detailed surveys for burrowing owl were conducted 2000 by IES,[15] which found signs of burrowing owls on the site, but no active nests during the spring months. Preconstruction surveys have been proposed by IES to ensure no loss of any future nesting activity by burrowing owls on the site.

Table 4.8-1
Special-status Animal Species Potential Occurrence in Project Vicinity

TAXA NAME	STATUS Federal/State	HABITAT CHARACTERISTICS (Possible Occurrence in Project Vicinity)
AMPHIBIANS/REPTILES		
Ambystoma tigrinum californiense California tiger salamander	C/CSC	Grassland and open woodlands with temporary or permanent water (known)
Clemmys marmorata Western pond turtle	*/CSC	Ponds, marshes, rivers, and streams (unlikely)
Rana aurora draytoni California red-legged frog	FT/CSC	Permanent ponds, pools, and streams (known)
Scaphiopus hammondii Western spadefoot toad	-/CSC	Shallow pools, ponds, and streams (possible)
BIRDS		
Agelaius tricolor Tricolored blackbird	*/CSC	Waterways and adjacent grassland and agricultural fields (possible)
Aquila chrysaetos Golden eagle	-/CSC, CP	Open mountains, foothills, and canyons (likely)
Athene cunicularia Burrowing owl	-/CSC	Open grassland and fields, farms, and ruderal areas (known)
Buteo regalis Ferruginous hawk	*/CSC	Forages in variety of habitats, but not known to breed in California (wintering individuals possible)
Circus cuneus Northern harrier	-/CSC	Marshes, fields, and grassland (likely)
Dendroica petechia brewsteri Yellow warbler	-/-	Dense willow and riparian woodlands (unlikely)
Elanus caeruleus White-tailed kite	-/CP	Open foothills, marshes, and grassland (likely)
Eremophila alpestris actia California horned lark	*/CSC	Open habitat with sparse cover (likely)

Falco columbariaus Merlin	-/CSC	Forages in variety of habitats, but not known to breed in California (wintering individuals possible)
Falco mexicanus Prairie falcon	-/CSC	Canyons, mountains, open grassland (possible)
Falco peregrinus Peregrine falcon	FE/SE, CP	Canyons, mountains, open grassland (possible)
Lanius ludovicianus Loggerhead shrike	*/CSC	Open habitat with scattered trees, shrubs, and other perches (likely)
MAMMALS		
Antrozous pallidus Pallid bat	-/CSC	Roosts in caves, tunnels, crevices, and buildings (unlikely)
Perognathus inornatus inornatus San Joaquin pocket mouse	-/CSC	Arid grassland with sandy soil (unlikely)
Plecotus townsendii townsendii Townsend's western big-eared bat	-/CSC	Roosts in caves, tunnels, crevices, and buildings (unlikely)
Vulpes macrotis mutica San Joaquin kit fox	FE/ST	Alkali sink, saltbrush scrub, grassland, and oak savanna (unlikely)

STATUS DESIGNATIONS:

Federal:

- FE = Listed as Endangered under the federal Endangered Species Act.
- FT = Listed as Threatened under the federal Endangered Species Act.
- PE = Proposed for federal listing as "endangered."
- PT = Proposed for federal listing as "threatened."
- C = A candidate species under review for federal listing. Candidates includes taxa for which the USFWS has sufficient biological information to support a proposal to list as endangered or threatened.
- * = These species were considered to be category 2 candidate taxa for federal listing until 28 February 1996 when the USFWS revised their status classification system. These species no longer have any candidate designation, but are unofficially classified as species of concern and could be added to the candidate list if information demonstrates they warrant listing.

State:

- SE = Listed as Endangered under the California Endangered Species Act.
- ST = Listed as Threatened under the California Endangered Species Act.
- CP = California fully protected species; individual may not be possessed or taken at any time.
- CSC = Considered a species of special concern by the California Department of Fish and Game; taxa have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

Horned lark tends to nest in sparse grasslands, and may utilize the ridgetops on the site for nesting. Loggerhead shrike and white-tailed kite may nest in the two trees in the northern drainage or the trees and shrubs along the Bailey Road frontage of the site. While no evidence of any nesting activity was observed during the field reconnaissance by the EIR biologist, pre-construction surveys and appropriate mitigation should be conducted to prevent the destruction of any nests in active use.

Essential habitat for San Joaquin pocket mouse, western pond turtle, other bird species of concern and bat species of concern is absent from the site. The wet meadow habitat and troughs in the northeastern portion of the site provides suitable habitat for western spadefoot toad, although the intense trampling and grazing by cattle severely limits opportunity for breeding by this and other amphibians.

Wetlands

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration and purification functions. The CDFG, the California Regional Water Quality Control Board (RWQCB) and U.S. Army Corps of Engineers (Corps) have jurisdiction over modifications to river banks, lakes, stream channels and other wetland features.[4]

The original Jurisdictional Delineation[16] and updated jurisdictional delineation[17] provided estimates of the extent of wetlands and unvegetated other waters subject to Corps jurisdiction. These delineations were then verified by the Corps, which concluded that the site contains 3.62 acres of jurisdictional waters of the U.S. These consist of the 3.62 acres of wetlands associated with the freshwater marsh and seeps in the northeastern corner of the site, 0.04 acre of wetlands and 0.04 acre of unvegetated "other waters" associated with the northern seasonal drainage, and 0.02 acre of unvegetated "other waters" associated with the central and eastern seasonal drainage along Bailey Road.

Relevant Policies of the Pittsburg General Plan

Several goals and policies of the Environmental Resources and Conservation Element of the Pittsburg General Plan[18] apply to biological and wetland resources on the site. These are listed below, numbered as they are in the General Plan.

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[4]Jurisdiction of the Corps is established through the provisions of §404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States without a permit, including wetlands and unvegetated "other waters." Jurisdictional authority of the CDFG over wetland areas is established under §1601-1606 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The RWQCB is responsible for upholding state water quality standards pursuant to §401 of the Clean Water Act.

RESOURCE CONSERVATION ELEMENT

Goals:

9-G-1 Protect conservation areas, particularly habitats that support special status species, including species that are state or federally listed as endangered, threatened, or rare.

9-G-2 Guide development in such a way that preserves significant ecological resources.

Policies:

9-P-1 Ensure that development does not substantially affect special status species as required by State and Federal agencies and listed in [General Plan] Table 9-1. Conduct assessments of biological resources as required by CEQA [the California Environmental Quality Act] prior to approval of development within habitat areas of identified special status species, as depicted in [General Plan] Figure 9-1.

9-P-2 Establish an on-going program to remove and prevent the re-establishment of invasive species and restore native species as part of development approvals on sites that include ecologically sensitive habitat.

9-P-7 During the design of hillside residential projects, ensure clustering of housing to preserve large, unbroken blocks of open space, particularly within sensitive habitat areas. Encourage the provision of wildlife corridors to ensure the integrity of habitat linkages.

9-P-8 As a condition of approval of new development, ensure revegetation of cut-and-fill slopes with native plant species.

9-P-9 Establish creek protection areas along riparian corridors, extending a minimum of 50 to 150 feet laterally on each side of the creekbed. Setback buffers for habitat areas of identified special status species and wetlands may be expanded as needed to preserve ecological resources.

9-P-10 No development should occur within creek setback areas, except as part of greenway enhancements (for example, trails and bikeways). Encourage developers to reserve space outside of the creek setbacks where endangered species habitat makes trail development inappropriate.

9-P-11 Ensure that riparian corridor characteristics are retained. Encourage the retention and/or establishment of creeks in the design of new development.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with biological resources. CEQA Guidelines (2003) identify potentially significant environmental effects on biological resources to include:

- a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, or regulations, or by the CDFG or USFWS;
- a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS;

- a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a creek preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impacts

Special-status Species

IMPACT 4.8-1: Proposed development would adversely affect a number of special-status animal species, including California tiger salamander and several species of raptors.

Proposed development would affect suitable habitat for a number of special-status animal species. Of particular concern is the known occurrence of California tiger salamander on the site. Other species of concern which could be affected by the project include: burrowing owl, loggerhead shrike, horned lark, white-tailed kite, and other raptors. Development would eliminate suitable habitat for these species, obstruct movement corridors, and could result in the take of individuals during grading and construction. The activities of future residents and their pets could contribute to increased harassment and loss of special-status animal species in areas identified as open space on-site and in the surrounding undeveloped lands.

The applicant's consulting biologist has been negotiating with representatives of the CDFG over appropriate mitigation for impacts on California tiger salamander. A Mitigation Agreement was prepared to provide for protection of California tiger salamander habitat and to allow for relocation of individual California tiger salamander from the proposed development area in the southern portion of the site, which was initiated during the fall and winter of 2000/2001. According to the Mitigation Agreement, up to 60 acres of grassland may be developed and a minimum of 25 acres must be preserved as permanent California tiger salamander habitat. The habitat preserve may either be in the northern drainage area or at an off-site location acceptable to the CDFG. Construction of a breeding pond and other enhancement provisions are required as part of the

Mitigation Agreement. The applicant's consulting biologist has proposed the new pond in the wetland complex in the northeastern portion of the site, although this could have secondary impacts on the extent of existing wetlands as discussed below under Impact 4.8-3.

The potential for harassment by children and pets is a potentially significant indirect impact of the project, and the new pond may be a particularly attractive feature. Further coordination with the CDFG will be necessary as part of the wetland permitting process to further define concerns and likely mitigation requirements with regard to California tiger salamander.

Although it appears that San Joaquin kit fox would not be affected by the project, preconstruction surveys should be required as recommended by IES to ensure no inadvertent take of individuals in the remote instance that they wonder onto the site during construction.

Conversion of grassland habitat on the site would generally not have a significant impact on the numerous special-status birds known or suspected to occur in the vicinity. No active nests are believed to occur on the site. However, preconstruction surveys would be required to prevent any inadvertent take of burrowing owl, horned lark, loggerhead shrike, or white-tailed kite which may establish new nests on the site prior to initiation of grading. If present, the significance of the potential impacts of development would depend on the location of any nest in relation to proposed improvements and the timing of grading and construction.

No special-status plant species are known from or suspected to occur on the site, and no adverse impacts are anticipated.

All of the following mitigation measures are required to reduce impacts to special-status species to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.8-1A: The applicant shall obtain all permits required by the USFWS, CDFG, RWQCB, Corps, and U.S. Environmental Protection Agency (e.g., 1600 series permits, 404 and 401 permits, incidental take permits and any others) and implement mitigation measures, as required by federal and state law, to reduce, offset, or avoid impacts to any species listed under either the state or federal Endangered Species Act or protected under any other state or federal law. The applicant shall consult with the agencies referenced above throughout the project development process to identify any and all permit requirements, with which the applicant shall comply. If so instructed by the agencies referenced above, the applicant shall consult with necessary state and federal wildlife agencies prior to obtaining permits. Evidence that the applicant has complied with the requirements of these agencies shall be submitted to the City's Engineering Department prior to issuance of any grading or building permits for the project.

4.8-1B: The wet meadow habitat in the northeastern portion of the site shall be enhanced as habitat for special-status amphibians and other wildlife. If cattle are to be retained in the proposed open space on site, the cattle shall be restricted outside the wet meadow habitat with livestock watering preferably provided through a pipe and trough directed outside of jurisdictional habitat. Any detention basin or pond constructed on the site shall be at least partially fenced with livestock fencing to exclude livestock from at least 50 percent of the shoreline when surface water is present.

4.8-1C: An educational and interpretive program shall be developed and implemented as part of the mitigation designed by the applicant's consulting biologist to prevent harassment of special-status amphibians and other wildlife by future residents and their pets. This shall include signage prohibiting pets in the wetland and pond vicinity, and informing residents of the sensitivity of the habitat.

4.8-1D: The following pre-construction surveys shall be conducted to reduce the likelihood that any special-status species might be harmed during initial grading and construction:

- Pre-construction surveys shall be conducted prior to initiation of ground disturbing activities to confirm absence of any occupied San Joaquin kit fox dens. The surveys shall be conducted by a qualified biologist according to the latest USFWS protocol, and shall serve to prevent the potential that a kit fox may be harmed during construction. Results of each survey shall be submitted to the USFWS and the CDFG. If there is evidence of occupied burrows within the construction area, the qualified biologist shall immediately contact USFWS and protective measures implemented, per USFWS protocol:
  - If occupied dens are located within the immediate construction area, each den shall be flagged. Den removal to avoid take of individual kit fox shall be accomplished according to USFWS guidelines.
  - Occupied dens found outside the development footprint but within 200 feet of construction or construction-related activities shall be encircled by protective exclusion zones which shall be clearly flagged. A qualified biologist shall be responsible for monitoring to ensure avoidance and to implement any necessary corrective measures during construction. In addition, the qualified biologist shall implement an employee education program on measures taken to reduce impacts to the species during construction. The monitor shall submit a post-construction compliance

report to USFWS within 45 calendar days of completion of each major project component.

- Pre-construction nesting surveys for horned lark, loggerhead shrike and raptors shall be conducted if initial grading for the project is to be conducted during the months of April through July prior to any destruction of suitable nesting habitat. The surveys shall be conducted by a qualified biologist no more than 30 days prior to initiation of grading. If any of these species are found within the construction area after April of the construction year, grading and construction in the area shall either stop or continue only after the nests are protected by an adequate setback approved by a qualified biologist. If avoidance of nests is not feasible, impacts on kite, shrike, and raptor nests shall be minimized by avoiding disturbances to the nest location during the nesting season unless a qualified biologist verifies that the birds have either a) not begun egg-laying and incubation, or b) that the juveniles from those nests are foraging independently and capable of independent survival at an earlier date.
- Pre-construction surveys shall be conducted for burrowing owl within 30 days of project-related ground-disturbing activities throughout the year to determine whether any nesting owls are present and to provide for their protection during the active breeding season or passive relocation during the non-breeding season if nests are encountered. The surveys shall be conducted by a qualified biologist and shall comply with the latest version of the *Burrowing Owl Protocol and Mitigation Guidelines*.

Wetlands

IMPACT 4.8-2: Proposed development would result in the elimination of 3.06 acres of jurisdictional wetlands and 0.06 acre of unvegetated "other waters."

Potential impacts to wetlands would include loss of most of the freshwater marsh and wet meadow habitat, filling of most of the seasonal drainages, and indirect changes associated with the increased potential for erosion and water quality degradation. Potential erosion and degradation of the downstream wetland habitat may result from increased urban runoff volumes and degraded water quality associated with proposed development. Soils exposed during grading and construction would contribute to increased sediment loads in drainages if adequate erosion control measures are not implemented. Increased urban pollutants, such as petroleum products from automobiles, and fertilizers, herbicides, and pesticides associated with landscape maintenance may contribute to long-

term degradation of water quality in the upper reaches of Lawlor Creek. (Also refer to drainage discussion in Section 4.3.)

Grading and development as proposed would eliminate most of the existing jurisdictional wetlands in the northeastern portion of the site, together with the seasonal drainages. Approximately 3.06 acres of the wet meadow area would be eliminated, as would all of the existing channel areas of the three seasonal drainages. An estimated 0.6 acre of existing wetlands between project Lots 117 through 120 and the northern edge of the site would not be filled as part of the project, but would most likely be affected by construction related activities and installation of a by-pass drainage.

As discussed under Impact 4.8-1, revisions to the project plans made to protect habitat for California tiger salamander would serve to preserve a portion of the wet meadow habitat. The detention basin design required to control peak runoff and accommodate anticipated sedimentation may also affect jurisdictional wetlands, although the intent of the applicant is to avoid seeps and freshwater marsh habitat. The proposed water supply line in the northern portion of the site would also pass through the wetland complex. If maintenance of the supply line were necessary in the future, it may require further disturbance to jurisdictional wetlands unless sited outside these features.

As noted above, the new breeding pond for California tiger salamander is currently proposed to be constructed in the wet meadow, which would contribute to a loss of this habitat type on the site even if the project were redesigned. Details on the size and specific location of the new breeding pond have not been prepared, but it would most likely be an open water feature fringed with freshwater marsh. This would improve the diversity of habitat and opportunities for breeding by California tiger salamander, but shall not result in the loss of existing wetland habitat. Although the value of the wet meadow is limited by intensive trampling and grazing by cattle, the area could be easily restored and its habitat value greatly increased by simply restricting cattle outside of the wetlands.

All of the following mitigation measures are required to reduce impacts on wetland and surface water resources to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.8-2A: The jurisdictional wetlands shall be preserved, restored and enhanced as part of designated open space on the site, as recommended in Mitigation Measure 4.8-1B. This shall include relocating proposed residential use and access off of Bailey Road, rerouting the alignment of the proposed water supply line, and relocation of the proposed California tiger salamander breeding pond to avoid the wetland complex. Possible use of the existing wetlands as part of a combined detention basin function shall consider the short- and long-term effects on wetland habitat required for installation and maintenance. Continued livestock access to the wet meadow area or any basin or pond constructed in the vicinity shall include consideration of the adverse effects of concentrated use on wildlife habitat values and include appropriate restrictive fencing.

4.8-2B: The proposed California tiger salamander breeding pond to be established in the northeastern portion of the site shall also be sited to avoid the existing jurisdictional wetlands. The existing wetlands shall be enhanced by at least partially restricting livestock outside a minimum of 50 percent of this feature or any basin or pond created in the vicinity. Construction activities shall be restricted and controlled as necessary to prevent inadvertent fill and disturbance to existing wetlands. Any loss or temporary disturbance required as part of establishing the new breeding pond shall provide for restoration or replacement wetlands as part of the mitigation plan required under Mitigation Measure 4.8-2C.

4.8-2C: Where avoidance of jurisdictional wetlands is not feasible, a detailed wetland protection, replacement, and restoration program shall be prepared by a qualified wetland consultant which meets with the approval of the City, the RWQCB, the Corps, and the CDFG. The wetland plan shall clearly identify the total wetlands and other jurisdictional areas affected by the project, and shall provide for re-establishment, enhancement, and/or replacement of wetland habitat lost as a result of proposed development. Details of the plan shall include the following:

- Identify the location(s) of mitigation areas. Mitigation for loss of existing wetlands shall be provided at a minimum replacement ratio of 1:1, and shall result in created or restored wetlands with a higher habitat value.
- Replacement wetlands shall be consolidated to the degree possible to improve the value of the currently scattered seeps.
- Specify performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be provided for a minimum of five years and continue until the success criteria are met.
- Define site preparation and revegetation procedures, an implementation schedule, and funding sources to ensure long-term management of the overall wetland mitigation plan.

4.8-2D: The applicant shall prepare a detailed erosion and sedimentation control plan and implement the provisions of that plan during construction on the site. The plan shall contain detailed measures to control erosion of stockpiled earth and exposed soil, provide for revegetation of graded slopes before the first rainy season following construction, and specify procedures for monitoring of the plan's effectiveness. Also refer to Mitigation Measure 4.2-5 in Section 4.2: Geology/Soils/Seismicity.

Sensitive Natural Communities

IMPACT 4.8-3: Proposed development and mitigation would eliminate most of the wet meadow and freshwater marsh natural communities from the site.

Implementation of the proposed project would require grading and removal of existing vegetative cover to accommodate roadways, building pads, and other improvements. As proposed, this consists of approximately 85 acres of non-native grasslands and most of the wet meadow habitat on the valley floor in the northeastern portion of the site. Although the wet meadow and freshwater marsh habitat is in a degraded condition due to intensive trampling and grazing by cattle, it still represents a sensitive natural community type with important habitat value and its loss or modification would be a significant impact. This habitat type could be easily restored by restricting cattle from the wetlands. A further assessment of potential impacts on the wetland natural community and recommended mitigation is provided under Impact 4.8-2.

The loss of non-native grassland habitat type would not in itself be considered a significant impact because of the non-native origin of the dominant species and the abundance of this community type in the project vicinity.

- ❑ **MITIGATION MEASURE 4.8-3:** Mitigation Measures 4.8-2A through 4.8-2D apply to this impact as well.

Wildlife Corridors

IMPACT 4.8-4: Development would obstruct opportunities for wildlife movement across the site and in the surrounding undeveloped lands of the southwest hills. This is considered a *significant and unavoidable* impact.

As proposed, development would eliminate the existing grassland and wetland habitat on approximately 85 acres of the site, and would create a barrier for wildlife movement for a distance of over one-half a mile across the crest of the southern hills of Pittsburg. This includes elimination of the seep and freshwater marsh associated with the wetlands, which most likely provides an important source of surface water to wildlife during the dry summer months. The proposed development would extend intensive suburban use into an area which currently is undeveloped and provides largely unrestricted access to wildlife. It is unlikely that wildlife would pass through the development itself because of its density. Together with the existing chain-link fence at the north edge of the Concord Naval Weapons Station, the project would form a considerable barrier to land-motile species. Access for wildlife around the southwestern corner of the site would be restricted around a 60-foot-wide opening separating development from the chain-link fence. The additional automobile traffic, nighttime lighting, and activity of future residents would all affect the suitability

of the undeveloped lands as wildlife habitat, particularly for species which are sensitive to human disturbance.

Mitigation proposed to address impacts on California tiger salamander and burrowing owl would serve to preserve a corridor for wildlife movement across the site through the northern drainage area. This provides an important link with the undeveloped lands to the west and east. An existing 5-foot-wide culvert undercrossing to Bailey Road designed for cattle access is most likely used by wildlife as well, and would provide a link to the wetland habitat, proposed breeding pond, and wildlife corridor through the northern drainage. No specific plans have been proposed to retain the undercrossing, although this is an important resource to wildlife which should be protected.

The proposed access road to the water tank to be sited in the northwestern portion of the site may severely disrupt the value of the northern drainage as a movement corridor for wildlife. A water supply line and possible detention basin would also disrupt habitat within the northern drainage, and both may require ongoing service access in the future. The steep grade on the north side of the drainage would require extensive grading to accommodate a road up the slope, which would conflict with the function of the area for wildlife mitigation. No details are available on how the access road and water supply line would be accommodated on the slope, but the improvements would require an elevation gain of almost 200 feet over a distance of less than 600 feet (a slope of 33 percent) to reach the water tank as proposed. The access road would also cross the drainage, which would interfere with movement by California tiger salamander and California red-legged frog as they migrate between breeding and estivation locations. Although vehicle access to the tank would presumably be infrequent, creating a road through the mitigation area would be an undesirable feature across the drainage. A preferable approach to providing vehicle and water supply line access to the future water tank, would be to use the existing fire trail which passes off-site to the west. From a biological perspective, the water tank should be relocated to the portion of the site to be developed, with the entire Area "D" parcel retained as undeveloped open space. However, the site is in Pressure Zone VI, which requires that the reservoir have a bottom elevation of approximately +860 feet and an overflow elevation of +885 feet. There are no potential sites in the portion of the site used for residential lots.

❑ **MITIGATION MEASURE 4.8-4:** The proposed project design shall be revised to protect sensitive habitat features and maintain opportunities for wildlife movement across the site to undeveloped lands to the west and east. These shall include the following modifications:

- Preserve, restore and enhance the existing wetland complex in the northeastern corner of the site for use by special-status amphibians and other wildlife. As described in Mitigation Measure 4.8-1B, cattle shall be at least partially restricted from the wetland and a program developed and implemented to prevent harassment and inadvertent take of wildlife by future residents and their pets. The proposed water supply line shall be rerouted outside the preserved and enhanced wetland complex.
- Establish the northern drainage as a wildlife movement corridor and habitat mitigation area for California tiger salamander and burrowing owl. The proposed

detention basin shall be restricted outside the northern drainage to maintain its function as a movement corridor for wildlife.

- Minimize road improvements in the northern drainage to avoid disruption of existing habitat. The vehicle and water supply line access to the future tank shall be restricted to the alignment of the existing fire road which continues up the drainage in a northwesterly direction.
- The existing drainage culvert shall be redesigned as a natural drainage feature with a low flow channel to improve its suitability as a safe movement corridor for wildlife.
- Modify proposed residential lots and roadways in the southwestern corner of the site to provide a minimum 100-foot-wide undeveloped upland corridor for wildlife south of the site and north of the chain-link fence along the Concord Naval Weapons Station property boundary. Fencing at the rear of proposed lots in this location shall be restricted outside this 100-foot setback to maintain a movement corridor for wildlife.
- Revise project plans to restrict housing and associated improvements to the south side of the northern drainage area.

City Plans and Policies

IMPACT 4.8-5: Proposed development would conflict with local policies protecting biological resources. This is considered a *significant and unavoidable* impact.

The project as proposed would conflict with several goals and policies of the Pittsburg General Plan. These include: Goals 9-G-1 and 9-G-2, which call for conservation of habitat known to support special-status species and the need to preserve significant ecological resources; Policies 9-P-7 and 9-P-9 through 9-P-11, which call for protection of sensitive habitat, creek and wetland setbacks, and establishment of wildlife corridors; and Policies 9-P-2 and 9-P-8, which address revegetation and restoration of sensitive habitat. Mitigation proposed as part of the project, or required by trustee agencies, should generally serve to provide compliance with the relevant goals and policies of the General Plan. These include Mitigation Measures 4.8-1A through 4.8-1D and 4.8-2A through 4.8-2D.

One possible issue of noncompliance is the adequacy of wildlife corridors identified in Policy 9-P-7. Although this policy does not include standards to determine compliance, this potential impact is identified as a significant unavoidable impact under Impact 4.8-4.

The project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved conservation plan. No such conservation plans have been adopted encompassing the project vicinity, and no impact is therefore anticipated.

❑ **MITIGATION MEASURE 4.8-5:** Mitigation Measure 4.8-4 applies to this impact, as well.

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[1] Ibis Environmental Services, *Biological Assessment*, prepared for Bailey Estates LLC, dated February 2001.

[2] Ibis Environmental Services, *San Joaquin Kit Fox Early Evaluation Report for the Bailey Road Property*, prepared for John Stremel, October 1999.

[3] Ibis Environmental Services, *Burrowing Owl Surveys, Bailey Road Housing Project*, dated March 2001.

[4] Zentner and Zentner, *Wetland Delineation, Foxhollow Property*, 1994.

[5] Ted Winfield & Associates, memo to John Stremel regarding status of jurisdictional delineation for Bailey Estates, dated April 7, 2001.

[6] Ted Winfield & Associates, *Bailey Estates, Alternatives Analysis Under Section 404(b)(1) of the Clean Water*, dated July 2002.

[7] California Department of Fish and Game, Mitigation Agreement between Bailey Estates LLC and the California Department of Fish and Game, Ref. N. 1802-2000-072-3, signed on April 4, 2001.

[8] Jane Valerius, letter to Sue Orloff, Ibis Environmental Services regarding Bailey Estates special-status plant survey, dated April 3 and July 20, 2001.

[9] Ibid.

[10] Op. cit., IES, October 1999.

[11] Op. cit., IES, February 2001.

[12] Op. cit., IES, March 2001.

[13] Op. cit., IES, October 1999.

[14] Op. cit., IES, February 2001.

[15] Op. cit., IES, March 2001.

[16] Op. cit., Zentner & Zentner.

[17] Op. cit., Winfield.

[18] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

4.9 CULTURAL RESOURCES

Setting

Cultural Background

Prehistory

The chronological sequence for central California and the Lower Sacramento Valley begins with the Windmiller Pattern,[1] which includes sites that date from about 4,500 (or earlier) to 3,500 years ago, followed by the Berkeley Pattern (previously part of the "Middle Horizon"), which covers a period from about 3,500 to 1,500 years ago and the late prehistoric period, or Augustine Pattern (formerly the "Late Horizon"), which ranges from about 950 to 150 years ago. The Windmiller sites are thought to be associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments. Berkeley Pattern sites are distributed in more diverse environmental settings, although a riverine focus is common. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California: it is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, the practice of cremation (in addition to flexed burial), and certain artifact types.

Ethnography

The ethnographic inhabitants of the project area were the Eastern Miwok, specifically, the Bay Miwok. The Eastern Miwok people can be divided into five culture groups, each having its own language, though all are included in the Utian linguistic stock.[2] Three of these five languages are grouped together based on the similarities among them into the Sierra Miwok language group. The other two languages, Plains Miwok and Bay Miwok, are considered distinct.

The Bay Miwok occupied the western portion of the Sacramento River Delta. Their territory was mainly on the south side of the Delta along Suisun marsh, extending south past Mt. Diablo, north of the Sacramento River to Rio Vista, east past Sherman Island and west to modern day Walnut Creek.[3] The Bay Miwok group was composed of a number of tribelets, the largest political unit, though it is difficult to say how many of these units existed.[4] Each of the Bay Miwok tribelets was an autonomous unit, none being subordinate to any other tribelets. Levy[5] estimates that the total population of the Bay Miwok was approximately 1,700 people though Kroeber[6] puts it significantly lower at 1,000 people.

Unfortunately, the area occupied by the Bay Miwok is little known ethnographically. The Miwoks living in the Delta rapidly disappeared as a result of contact with European explorers and settlers. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal lifeways. In 1833, a disease that was most likely cholera or malaria swept through the valley and wiped out entire communities.[7,8] Further decimation occurred largely from the 1849 gold rush and its aftermath. According to Wallace "thousands of prospectors bound for the mines passed through it (the northern San Joaquin valley), relentlessly pushing aside any natives . . . [later] the rich soils of the valley attracted many ex-miners to farming . . . driving the remaining Yokuts [and Bay Miwok] off their hunting and food-gathering lands."

Known Cultural Resources and Previous Cultural Resource Surveys

A record search of the project area (File No. 01-25) was conducted on January 16, 2001, by the staff at the Northwest Information Center, Rohnert Park, California. All known archaeological sites and previous cultural resource surveys within a one-quarter-mile radius of the Bailey Estates project area boundary were researched. The National Register of Historic Places, the California Register of Historic Resources, the California Inventory of Historic Resources (1976), California Historical Landmarks (1996), the California Points of Historical Interest listing (May 1992 and updates), the Historic Property Directory (Office of Historic Preservation current computer list), the CALTRANS Local Bridge Survey (1989), the Survey of Surveys (1989), and historic GLO Plats, were examined to determine whether any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the project area.

No historic or prehistoric archaeological sites, architectural resources or other cultural features are recorded within or adjoining the Bailey Estates project area.

Previous Surveys

One previous cultural resource survey within the project area is on file with the Northwest Information Center; S-16216.[9] The survey was conducted as part of the studies for the proposed Bay Point Landfill. The survey was negative.

Literature Search Results

In addition to the sources mentioned above, information was gathered from late early 20th century U.S. Geological Survey topographic maps of the area. These resources provided limited historic information on the location of possible structures, foundation remains, or other historic resources within the project area.

Field Survey

A pedestrian survey of the project area was conducted by the EIR archaeological firm on January 16 and 17, 2001. The eastern portion of the site is currently used for cattle grazing; thus, this portion of the parcel has good ground visibility because of the comparable lack of vegetation. The western portion, however, presented very poor ground visibility due to the thick grasses covering all areas except for dirt roads and small washes. The parcel was surveyed using 20 meter transects except in those areas where the terrain prohibited survey (i.e., extremely steep hillsides). All visible ground surfaces were examined for the presence of historic or prehistoric archaeological site indicators. No evidence of historic or prehistoric cultural resources was observed.

Impacts and Mitigation Measures

Significance Criteria

This subsection describes impacts associated with cultural resources. Both the California Environmental Quality Act and National Historic Preservation Act guidelines require that the proposed project take into consideration the potential effect of the undertaking on cultural resources. In order to evaluate the potential effect of the project on architectural and historic resources (over 45 years in age) or prehistoric archaeological resources, a record and literature

search was conducted at the Northwest Information Center to establish the location of previously conducted cultural resource surveys and known resources within a one-quarter-mile radius of all project components. This background record search also provided a basis from which to predict the archaeological potential of the area.

In accordance with CEQA and National Historic Preservation Act regulations and requirements, if the area has not been previously surveyed, or if surveyed and/or documented inadequately, a qualified archaeologist must then conduct a survey of all project components as a means of identifying and assessing the potential impact of the project on known or predicted cultural resources. Site significance criteria are those contained in CEQA Section 15064.5 and 36 CFR 60.4. Literature on the history, prehistory, and ethnography of the area was also consulted as an aid in developing the archaeological potential of the area, and to prepare a setting section for use in evaluating the significance of known or predicted resources.

CEQA contains provisions relative to preservation of historic (and prehistoric) cultural sites. Section 15126.4 of CEQA directs public agencies to "avoid damaging effects" on an archeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated to determine impact and develop mitigation measures. CEQA Section 15064.5 states:

> *Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) including the following:*
>
> *(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
>
> *(B) Is associated with the lives of persons important in our past;*
>
> *(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or*
>
> *(D) Has yielded, or may be likely to yield, information important in prehistory or history.*

Similarly, the National Register of Historic Places criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with NHPA Section 106. Those criteria state that eligible resources comprise:

> *... districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important to history or prehistory.*

Archeological site evaluation assesses the potential of each site to meet one or more of the criteria for "importance" (CEQA) or NRHP eligibility based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

CEQA Guidelines (2003) identify a potentially significant impact of a project as one that would:

- cause a substantial adverse change in the significance of an historical or archaeological resource pursuant to CEQA Section 15064.5;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- disturb any human remains, including those interred outside of formal cemeteries.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Impact

IMPACT 4.9-1: Previously undiscovered cultural resources may be unearthed during construction on the project.

Based upon the findings of the recent record and literature search, impacts to significant cultural resource sites within the project area not anticipated. It is, however, possible that buried or otherwise unknown resources may be discovered during construction or vegetation removal. Prehistoric resources include chert or obsidian flakes, projectile points, mortars and pestles, and dark, friable midden soil containing bone and shell. Historic resources include glass, metal, ceramics, wood and similar debris.

❑ **MITIGATION MEASURE 4.9-1:** Should archaeological materials be uncovered during grading, trenching or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped. The City of Pittsburg shall be notified within 24 hours and an archaeologist who is certified by the Society of Professional Archaeology (SOPA) shall be retained by the developer to evaluate the significance of the find and suggest appropriate mitigation(s), if deemed necessary. Significant cultural materials include, but are not limited to, aboriginal human remains, chipped stone, groundstone, shell and bone artifacts, concentrations of fire-cracked rock, ash charcoal, shell, bone, and historic features such as privies or building foundations.

[1] Fredrickson, David, Early Cultures of the North Coast Ranges, California. Ph.D. Dissertation. Davis: Department of Anthropology, University of California, Davis, 1973.

[2] Levy, Richard, Eastern Miwok. In: *Handbook of North American Indians*, Vol. 8, California. Smithsonian Institution, Washington, D.C., 1978.

[3] Levy (1978:399).

[4] Moratto, M. J., California Archaeology, Academic Press, Orlando, 1984.

[5] Levy, op. cit.

[6] Kroeber, Alfred L., Handbook of the Indians of California, California Book Company, Ltd. Berkeley, 1925.

[7] Moratto (1984:172).

[8] Wallace, William, Northern Valley Yokuts. In Robert F. Heizer, vol. ed., *Handbook of North American Indians*, Vol. 8: California: 462-470. Washington, D.C.: Smithsonian Institution, 1978.

[9] Desgrandchamp, Cindy and Robert Orlins, An Archaeological Assessment of the Bay Point Landfill, Contra Costa County, California. Report no. S-16216 on file at Northwest Information Center, Sonoma State University, Rohnert Park, CA, 1988.

Additional References

Cook, S. F., The aboriginal population of the San Joaquin Valley, California. Berkeley: University of California Anthropological Records 16(2):31-74, 1955.

Fredrickson, David, Archaeological Taxonomy in Central California Reconsidered. In R.E. Hughes, ed., Toward A New Taxonomic Framework for Central California. Berkeley: Contributions of the University of California Archaeological Research Facility, 1993.

Olsen, W.H., and L.A. Payen, Archaeology of the Grayson site, Merced County, California. Sacramento: California Department of Parks and Recreation. Archaeological Reports 12; 1969.

4.10 VISUAL QUALITY

Setting

Physical Characteristics

The project site is located in the Los Medanos Hills at the north edge of the Diablo Range and directly south of the City of Pittsburg. These hills provide a natural feature that is important to the visual quality of the community and contribute to the entryway for the City. Mt. Diablo provides a backdrop to the hills when viewed from State Route 4 (SR4) and the city center. Bailey Road extends south from SR4, wending its way through the hills to the summit at which point it enters the Concord Naval Weapons Station property, eventually descending into the City of Concord. The hills on both sides of Bailey Road at the project site and north of the site, are not only bisected by the roadway, but also by a deeply-incised creek channel identified as Lawlor Ravine. The drainage swales on the site serve as the headwaters for Lawlor Creek. The hills in the project area trend in a northeast direction and are generally separated by steep-sided ravines. The extent of flatland is limited. The largest of the flat area is located in the northeast portion of the project site and contains a freshwater marsh, grassy seep and wet meadow. The hills are covered with non-native grassland and are essentially void of trees.

Visual Resources

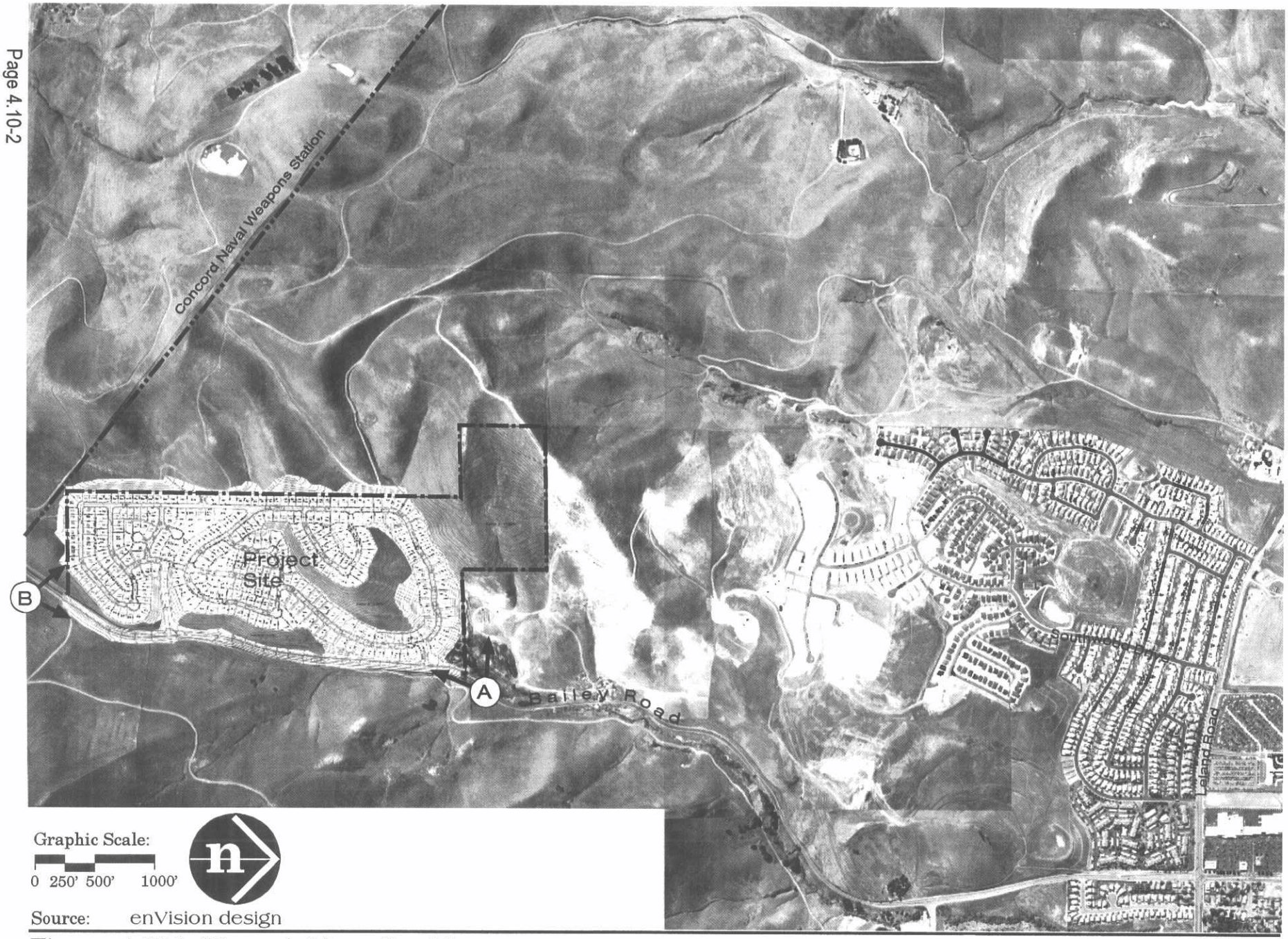
Photographs of the site are included in this section and the location of each photo is identified in Figure 4.10-1. As shown in Figure 4.10-2, the eastern portion of the project site dominates the viewshed for motorists traveling in either direction along Bailey Road. When approaching the project site from the north, the viewshed takes in the wetland area in the forefront and the hills rising above the valley floor. The northern drainage swale is visible as well. Proceeding south on Bailey Road, the views of the site take in the central drainage swale and the hills that rise above the roadway. When approaching the site from the south (traveling northbound), the hills dominate the viewshed on both sides of the roadway. When traveling in either direction on Bailey Road the motorist cannot see the internal portions of the project site due to the foreground hills that block views from Bailey Road.

Three hundred and sixty-degree views can be seen when standing on the hill tops at the project site. Conversely, when viewing south towards the project site from the city center, it is difficult to pick out the site due to similar terrain features throughout the hilly area

The project site is vacant and currently used for cattle grazing. Land immediately south and east of the site (within the Bailey Road viewshed) is also vacant with the exception of a ranch house on the neighboring property. The area through the reach of the project site and immediately north to the point where development begins provides a pastoral setting when leaving the urban communities of Pittsburg and Concord.

Pertinent Plans and Policies

The Pittsburg General Plan[1] contains specific polices pertaining to visual resources, as well as policies that pertain to hillside development; urban design, protection of ridgelines, creeks and other significant resource areas; and grading. The relevant policies are as follows:



Graphic Scale:
0 250' 500' 1000'

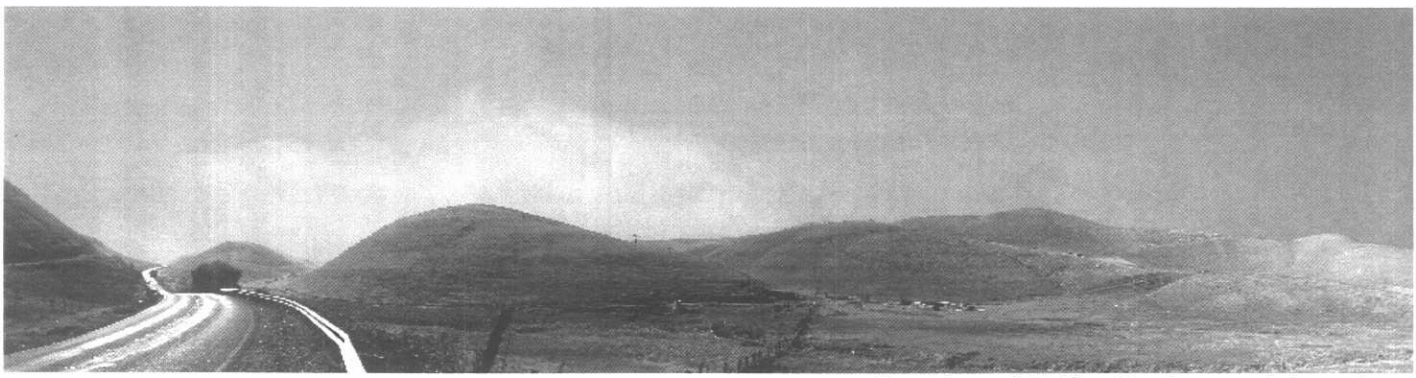
Source: enVision design

Figure 4.10-1 Viewpoint Location Map

Northbound Bailey Road from Concord

Southbound Bailey Road near south entry to project

Northbound Bailey Road near north entry to project



Southbound Bailey Road at north boundary

Figure 4.10-2 Existing Views of Project Site along Bailey Road

LAND USE ELEMENT

City-Wide Land Use Policies

Goal:

2-G-8 Ensure that hillside development enhances the built environment, improves safety through slope stabilization, is respectful of topography, and other natural constraints, and preserves ridgelines and viewsheds.

Hillside Development

Policy:

2-P-22 Revise the City's Hillside Preservation Ordinance to reflect General Plan policy direction. Revisions may include, but are not limited to:

- Designating protected ridgelines, creeks, and other significant resource areas, along with daylight plane or setback standards;
- Defining protected viewsheds;
- Designating location and density of low-density hillside residential development based on slope stability and visual impact;
- Provision of well-designed hillside projects that provide larger, family-oriented lots; and
- Protection of significant ridgelines and incorporation of hill forms into project design.

Southwest Hills

Goals:

2-G-31 Maintain the general character of the hill forms.

2-G-32 Encourage development of higher-end, low-density residential neighborhoods.

Policies:

2-P-92 Allow Low Density residential development west of Bailey Road, as shown on the General Plan Diagram. Ensure that such development is minimally visible from Bailey Road and mitigates any impacts to creeks and wetlands in the area.

URBAN DESIGN ELEMENT

Views, Ridges, and Edges

Goals:

4-G-1 Retain views of major and minor ridgelines within the southern hills, as designated in [General Plan] Figure 4-2.

4-G-2 Preserve minor ridgelines south of State Route 4 as open space to provide screening for hillside development.

Policies:

4-P-2 As part of the development review process, require design review of proposed hillside development. Ensure that:

- Hillside development is clustered in small valleys and behind minor ridgelines, to preserve more prominent views of the southern hills.
- Hillside streets are designed to allow open views by limiting the building of structures or planting of tall trees along the southern edge or terminus of streets.

4-P-3 As part of the development review process, limit building heights and massing where views of the hills from adjacent properties and public spaces could be preserved.

Urban Edges

Policies:

4-P-6 Ensure that developers of new residential projects in the southern hills plant trees and other vegetation along collector and arterial roadways, in order to maintain the sense of "rural" open space at the City's southern boundary.

4-P-7 Ensure that design treatment of new development at the City's southern boundary retains a rural feel by:

- Discouraging the use of solid walls along these edges (fences must be visually permeable, however, discourage use of chain link in front and side yards);
- Using materials and design to promote a rural feeling (for example, wooden or other rustic materials); and
- Encouraging development at the outer edge of the City to face outwards toward the rural landscape (preventing a solid wall of residential backyard fences).

Hillside Development

Goals:

4-G-4 Encourage development that preserves unique natural features, such as topography, rock outcroppings, mature trees, creeks, and ridgelines, in the design of hillside neighborhoods.

4-G-5 Encourage a sense of rural character in the design and construction of hillside development, including extensive landscaping, rooftop terraces, sloping rooflines and use of natural materials.

Preservation and Grading

Policies:

4-P-10 Minimize grading of the hillsides . . .

4-P-12 Encourage terracing in new hillside development to be designed in small incremental steps. Extensive flat pad areas should be limited.

4-P-14 Preserve natural creeks and drainage courses as close as possible to their natural location and appearance.

Lot Configuration

Policies:

4-P-15 Minimize the visual prominence of hillside development by taking advantage of existing site features for screening, such as tree clusters, depressions in topography, setback hillside plateau areas, and other natural features.

4-P-16 Allow flag lots with common driveways within hillside neighborhoods, in order to encourage terracing of buildings while minimizing roadway cut and fill (see [General Plan] Figure 4-4).

4-P-18 Allow flexible (for example, staggered) front and side building setbacks (including zero-lot-line and attached conditions) within clustered hillside residential areas if this allowance will protect an existing slope.

4-P-19 Encourage lot configuration such that perimeter walls and fences along arterial corridors within the southern hills are not needed.

4-P-20 Discourage lot orientation that fronts onto the cross-slope of street segments on steep grades.

4-P-21 Encourage single-loaded streets parallel to steep slopes, with placement of lots on the uphill side of the street, such that homes front down-slope and allow open vistas from the public street.

4-P-22 Discourage placement of lots that allow the rear of homes to be exposed to lower elevation views.

Building Character

Policy:

4-P-23 As part of the City's Hillside Development Standards, encourage architectural design that reflects the undulating forms of the hillside setting, such as "breaking" buildings and rooflines into several small components (see [General Plan] Figure 4-6).

Policies pertaining to the urban edge and building character will be considered during the design review process. Consistency with other polices are discussed below.

Impacts and Mitigation Measures

Methodology

In general, the first step in preparing a visual impact analysis is to determine the locations from which the project site is visible and to analyze the impact of the proposed development on views. To determine if the visual impact is significant or insignificant, a number of factors must be considered which include:

- **Percentage of viewshed.** The portion of the total area that can be seen which is comprised of the site. Is the site part of a larger distant view or does it fill the whole view area?
- **Duration of view.** The amount of time attention is focused on a particular view. Is the site in view for a significant period of time?
- **Frequency of viewers.** The number of people who will view the site in a given period of time. Will a significant number of people see the site from this location?
- **Angle of view.** Location of site within total view area. Is it directly in the line of sight or is it a peripheral part of the view?

Key viewpoints were selected for simulating post-development views. Due to topographic constraints, only two views were selected—at the northern and southern ends of the project site when traveling in either direction on Bailey Road. For each view, photographs of the project site were taken and computer-generated visual simulations were prepared to illustrate how the view would appear after project completion. The simulations depict the massing of the houses based upon the applicant's site plan and zoning requirements of the City. The photo simulations do not depict architectural or landscaping details.

Significance Criteria

This subsection describes impacts associated with visual resources in the project area. CEQA Guidelines (2003) indicate that a project will normally have a significant adverse effect on the environment if it has a substantial, demonstrable negative aesthetic effect on a scenic vista, a scenic resource, or the existing visual character or quality of the site and its surroundings.

This determination is based upon several criteria, including observer position, view corridors, existing and proposed screening, backdrop and characteristics of the proposed development. The existing visual character of the surrounding area is also taken into account in applying this definition. This analysis also considers Pittsburg's General Plan goals and policies to preserve the scenic beauty of Pittsburg as a basis for evaluating visual impacts. There is no quantitative method for assessing visual impacts; thus, judgement of the significance of a particular effect may be expected to differ among viewers (readers of the document). For this analysis, the criteria that are used to determine whether a significant visual impact would occur includes whether the implementation of a residential development would:

- substantially and negatively affect visual character in areas of moderate to high visual sensitivity through the introduction of incompatible elements as they relate to scale, form, line, color or texture;

- substantially and negatively alter existing visual character of an area or viewshed from rural, pastoral or natural, to urban, commercial or other more dense land use patterns;
- substantially and negatively block or screen views caused by the introduction of new development; or
- conflict with adopted goals and policies of the General Plan.

All impacts are considered significant adverse impacts unless identified otherwise. The corresponding mitigation measure(s), unless otherwise noted, would be sufficient to reduce impacts to a less-than-significant level.

Project Details

The applicant is proposing to develop 122 acres with 319 single-family residential units. The site plan illustrates that the project will be accessed from Bailey Road through two entrance streets. With the exception of the siting of a water tank, the northern portion of the site will remain in open space. Lot size will range from 6,000 square feet to 14,000 square feet, with an average lot size of 8,000 to 9,000 square feet. Architectural and landscaping details have not been provided for the project.

Mass grading will allow for lots to extend up the hillsides and across the flattened ridgelines. Hillside buffer areas have been set aside between Bailey Road and Lots 215–226 and between Lots 16 and 30. A 12.5-acre area on the north/northeast-facing slope in the northern section of the development will remain as open space. This area separates the lower portion of the development fronting Bailey Road and the houses located at the top of the slope.

Grading of the site will include major cuts and fills of which the maximum depth of cut is approximately 80 feet and the maximum fill thickness is approximately 70 feet. Three drainage swales are proposed for fill to accommodate either house sites or roadways. Grading will be required in the northerly portion of the parcel to accommodate a water tank and service road. The roadway is located between Lots 104 and 105 and would extend across the slope in a northwest direction to the water tank.

Project Impacts

Inconsistencies with the General Plan

IMPACT 4.10-1: The proposed project is inconsistent with General Plan policies pertaining to grading and retaining natural creek channels.

Policies 4-P-10 and 4-P-12 call for minimizing grading in the South Hills and limiting extensive flat pad areas. Policy 4-P-14 calls for the preservation of natural creeks and drainage courses. Project plans call for extensive grading within the developable portion of the site, the creation of flat pad lots and the filling of natural drainage ways.

Figure 4.2-6 in the Geology/Soils section illustrates the graded areas of the site. The major cut slope is a 100 feet high north-facing slope that overlooks Lots 201–206. There are also 35- and 60-foot-high cut slopes on the open space parcel to the west of the proposed development. The major fill slopes are located on the flanks of the southern entrance road, in the northerly drainage swale and along the northern boundary. Lots will step up the face of the slopes to a point where the grades will level off to create a flat subdivision.

The northerly and southerly drainage swales would be filled rather than retained as a natural feature of the site.

All of the following mitigation measures are required to reduce impacts pertaining to General Plan grading policy inconsistencies to less-than-significant levels.

❑ **MITIGATION MEASURES:**

4.10-1A: The development plan shall be redesigned to retain the northern drainage. (Also refer to Mitigation Measure 4.8-4 in the Biological Resources section.)

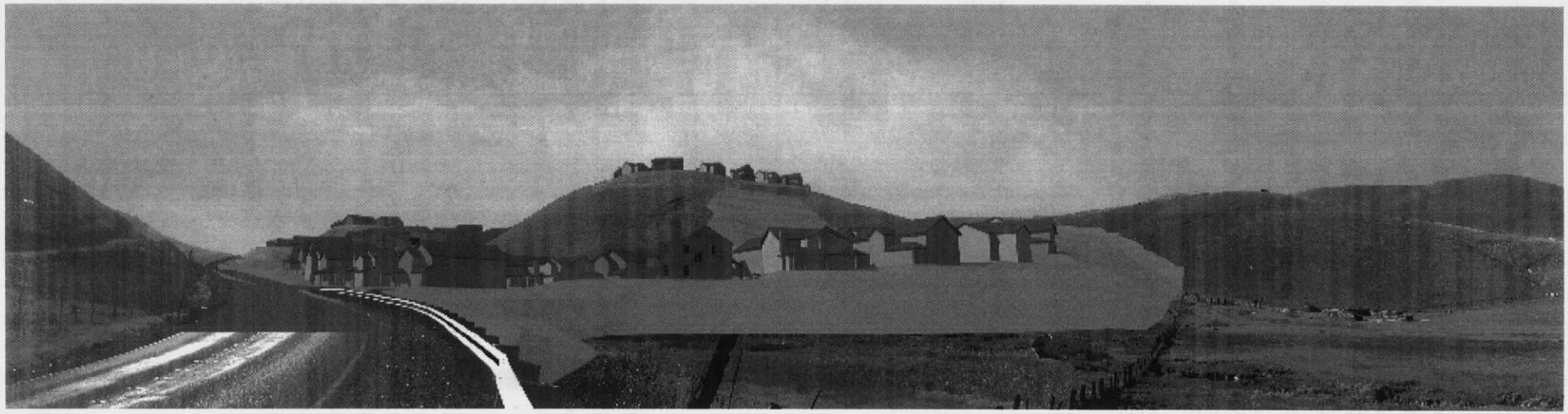
4.10-1B: The applicant shall provide a grading plan that provides some terracing of the hillsides to avoid large expanses of flat pad areas.

IMPACT 4.10-2: The placement of Lots 183–190 is inconsistent with City policies relating to hillside development.

General Plan Land Use Goal 2-G-8 calls for hillside development to be respectful of topography, and other natural constraints, and to preserve ridgelines and viewsheds. Policy 2-P-92 calls for minimizing the visibility of development from Bailey Road. Furthermore, urban design policies contained in the General Plan address the issue of visibility in that setbacks should be flexible and lots should not be placed where the rear of homes would be exposed to lower elevation views.

Lots 183–190 would be exposed to views from Bailey Road as illustrated in Figure 4.10-3. (Refer to Figure 2-3 for the location of Lots 183–190.) The grading plan indicates that flat pad lots would be created on top of the ridge which will produce the effect of houses floating on top of the hill rather than conforming to the topography. Although the simulation only depicts the units on the northeast-trending ridge, the same effect will apply throughout the project where flat pad lots have been created on the ridge tops. Without the benefit of detailed house plans, the visual impact cannot be fully realized. Therefore, it is important that measures to reduce visual impacts be included as conditions of Tentative Map approval.

View A: Bailey Road Panorama Looking South to West - Existing View



View A: Bailey Road Panorama Looking South to West - Project Simulated

Source: enVision design • Dan Parker/Architect

Figure 4.10-3 Photosimulation of proposed project as viewed from Location A

One method of reducing the project's visibility is to incorporate single-loaded streets where housing is constructed on only one side of the roadway. Houses located on single-loaded streets should be built so that the front of the house faces out to Bailey Road and lower elevation views.

- ❑ **MITIGATION MEASURE 4.10-2:** Provide single-loaded streets and have the houses facing out towards Bailey Road.

Project Visibility

IMPACT 4.10-3: The proposed project would be visible from Bailey Road when traveling in either direction.

A portion of General Plan Policy 2-P-92 calls for ensuring that development is minimally visible from Bailey Road. As illustrated in the photosimulations in Figures 4.10-3 and 4.10-4, the views of the project are not minimized when traveling in either direction on Bailey Road. The project is visible, even though the plan attempts to minimize the visual intrusion by setting back a minimum of 50 feet and elevating the houses above the roadway in the central and southern portions of the development. In Figure 4.10-3, the houses are shown directly abutting the roadway. In addition a soundwall would be required as mitigation to reduce traffic noise levels for the houses abutting Bailey Road. The use of a soundwall coupled with the development of single-family houses alters the existing visual character of the viewshed from that of a pastoral setting to an urban land use pattern. The development also consumes a major portion of the motorists' view when traveling in either direction.

Additionally, Policy 2-P-92 states that Low Density residential development shall be allowed west of Bailey Road as a means by which visual impacts can be reduced. This policy correlates with Policy 4-P-2 of the Urban Design Element that calls for clustering hillside development in small valleys and behind minor ridgelines to preserve more prominent views of the southern hills. The proposed project is a standard subdivision and does not incorporate clustering.

Policy 4-P-15 of the Urban Design Element also calls for minimizing the visual prominence of hillside development by taking advantage of existing site features for screening, such as tree clusters, depressions in topography, setback hillside plateau areas, and other natural features. Other than the hillsides, the site does not contain many natural features. The applicant has stated that landscaping would be planted between Bailey Road and the lots. However, given that several of the lots abut directly to Bailey Road, as well as extend up the north- and south-facing slopes, the visual impacts will not be entirely eliminated through the use of landscaping. The housing units will be visible above the landscaping and the views from Bailey Road will be those of rear elevations and fences.

Bailey Road Panorama Looking West to North - Existing View

Bailey Road Panorama Looking West to North - Project Simulated

Source: enVision design • Dan Parker/Architect

Figure 4.10-4 Photosimulation of proposed project as viewed from Location B

❑ **MITIGATION MEASURE 4.10-3:** The proposed project shall be redesigned to incorporate the following site planning measures to reduce visual impacts:

- Eliminate the lots in the northern drainage and adjacent to Bailey Road. This would preclude the necessity to build a soundwall, which is not in keeping with maintaining a rural character along Bailey Road, and would also help to mitigate noise and the loss of habitat as discussed in the Noise and Biological Resources sections.
- Increase the setback along the Bailey Road frontage.
- Provide single-loaded streets and have the houses facing out towards Bailey Road.

IMPACT 4.10-4: Grading scars will be visible where major cuts and fills are proposed.

Major cut and fill slopes visible from Bailey Road include the 45-foot-high fill to create the southern entrance road and the 100-foot-high cut on the north-facing slope behind Lots 201 206. Internally, but not visible to Bailey Road motorists, are two 65-foot-high cuts and a 35-foot-high cut in the open space immediately west of the project site, as well as a 40-foot-high fill east of Lots 152 to 154. Slopes are proposed at 2:1 throughout the project. Such a steep gradient can many times preclude effective revegetation resulting in barren slopes. The steepness results in shallow soil which prevents landscaping from taking hold and flourishing. For vegetation to thrive under these conditions, more intensive measures must be used than normally used on less steep slopes. Such measures may include drilling deep holes and constant irrigation. (Also refer to discussion in Section 4.2 regarding the project grading plan.)

❑ **MITIGATION MEASURE 4.10-4:** Mitigation Measures 4.2-2A through 4.2-2K would apply to this impact.

IMPACT 4.10-5: A water tank will be constructed on an east-facing ridge in the northwest corner of the project site, overlooking Bailey Road. The water reservoir presents a potentially significant visual impact in an otherwise undeveloped open space area.

A water tank is proposed in the northwest portion of the project site at an elevation that will be higher than the development. Preliminary plans indicate the tank would be sited between elevations 870 and 890. Due to the distance and the topography, the tank will be minimally visible from Bailey Road and from houses with north-facing views in the Bailey Estates project. Depending upon the location of future land development projects to the southwest of the property, the tank could be visible to residents of those projects.

- ❑ **MITIGATION MEASURE 4.10-5:** The proposed reservoir shall be a buried, steel-reinforced concrete tank. No more than 3 feet of the reservoir shall extend above pad level (max). Additionally, aggressive erosion control measures shall be employed to revegetate graded slopes created for reservoir construction, including the service road.

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[1] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001.

5
IMPACT OVERVIEW

5
IMPACT OVERVIEW

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

According to CEQA Guidelines Section 15126(b), a Draft EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of a proposed project. Also, a Draft EIR must discuss why the project is being proposed, notwithstanding such impacts. The mitigation measures described throughout Chapter 4: Environmental Setting, Impacts, and Mitigation Measures, which include policies in the adopted Pittsburg General Plan,[1] would avoid or eliminate most significant impacts. However, the EIR concluded that significant unavoidable impacts would occur in the areas of land use, transportation/circulation, public services and biological resources, as described below.

Land Use

The conversion of the project site from range land to urban development will incrementally contribute to the loss of range land in Contra Costa County (Impact 4.1-3). When development occurs on the city fringe or in the unincorporated area of the County, grazing land is lost forcing ranchers to either discontinue ranching or to find other grazing land outside the area. As ranchers move their grazing operations out of the area, a trickle down effect occurs such as the loss of businesses and services that support the ranching industry. While this project alone will not collapse the industry, it will cause an incremental increase towards the decline of the ranching industry in Contra Costa County. The loss of rangeland on the project site was analyzed in the cumulative loss of rangeland during the City's General Plan update and in the County's EIR on the 2000 ULL amendment. With the exception of the northwest corner, the project site is within the ULL.

Transportation/Circulation

Year 2025 traffic projections identified two intersections that could not be mitigated to an acceptable level of service (Impacts 4.4-3 and 4.4-4). The intersections of Bailey Road / State Route 4 (SR4) Eastbound Ramp and Bailey Road / Concord Boulevard are encumbered by physical constraints that would preclude future improvements. (A full discussion of this impact is provided in Section 4.4: Transportation/Circulation.) The mitigation measures recommend specific improvements and identify payment of traffic mitigation fees as a means of providing funding for necessary improvements. Because Mitigation Measure 4.4-4A does not appear constructable due to existing retaining walls, it should be added to the list of significant and unavoidable impacts.

Near-term project impacts at the Bailey Road / Myrtle Drive and Bailey Road / Concord Boulevard intersections are significant (2005 and 2010). The mitigation measures recommended (Mitigation Measures 4.4-1A, 4.4-1B, 4.4-2A, 4.4-2B and 4.4-4D) involve the payment of a pro rata share of the recommended improvement, with the notation that cumulative impacts at the two Concord intersections will remain *significant and unavoidable* until the improvements are installed.

Public Services

Impact 4.7-1: Emergency/Fire Response states that the project site is located outside the 1.5-mile radius of the nearest fire station, and therefore cannot meet the 5-minute response time as specified by the General Plan and the Fire District. Mitigation measures are recommended for Impact 4.7-1, but the mitigation measures are not sufficient to fully mitigate the impact. Impact 4.7-2: Urban/Rural Interface (Wildland Fire) and Impact 4.7-3: Police Protection each include mitigation measures, but they are not sufficient to fully mitigate the impacts. As addressed in Impact 4.7-5, school fees mitigate the impact of project-related students. However, the costs associated with acquisition of sites and construction of schools requires both developer fees and state bond funds.

Biological Resources

Impacts 4.8-4: Wildlife Corridors states that the 319-unit Project would obstruct opportunities for wildlife movement. Impact 4.8-5: City Plans and Policies indicates conflicts with General Plan goals and policies that address protection of habitat for special-status species and preservation of ecological resources. Mitigation measures for Impacts 4.8-4 and 4.8-5 are recommended in Section 4.8: Biological Resources, but even with effective implementation of these measures, there is a residual impact that, while difficult to quantify, can never be completely eliminated.

All other impacts identified in Chapter 4 can be mitigated to a less-than-significant level either through redesign of the project or implementing the recommended mitigation measures.

5.2 IMPACTS FOUND NOT TO BE SIGNIFICANT

Based upon the Initial Study evaluation (Appendix A), the project would not create an impact on population and housing, or mineral resources, nor would the project create a hazard to the public or result in the generation of significant quantities of hazardous materials.

5.3 CUMULATIVE IMPACTS

CEQA requires that a Draft EIR examine the cumulative impacts of a proposed project. As discussed in Section 15130(a)(1) of the CEQA Guidelines, a cumulative impact "consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." The analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall "reflect the severity of the impacts and their likelihood of occurrence" (Section 15130(b)).

Cumulative impacts refer to the change in environment that results from the incremental impact of the project when added to other, closely related past, present or reasonably foreseeable, probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Areas of cumulative impact for the project include transportation, air quality, public services (schools), biological resources and visual resources.

In order to assess cumulative impacts, a Draft EIR must analyze either "a list of past, present, and probable future projects" or "a summary of projections contained in an adopted general plan or related planning document." Since there are several major projects underway in Pittsburg, this analysis examines relevant projects rather than projects. Major projects affecting the Southwest Hills area of Pittsburg include:

- ***San Marco Residential Development.*** Located on 640 acres, the San Marco project includes single- and multi-family housing units. Approximately 1,400 units are planned for Hillside Low Density and Low Density Residential. An additional 1,500 units are allotted for Medium and High Density Residential.
- ***Alves Ranch.*** High Density Residential and Business Commercial uses are planned adjacent to the Pittsburg/Bay Point BART Station, intended for mixed-use, walkable development patterns. Medium and Low Density Residential units are planned south of West Leland Road. The yield of this project is 1,100 residential units, along with 870,000 square feet of commercial/light industrial uses. Additionally, an elementary school, having a capacity of 800 students, is planned for the site.
- ***BART Specific Plan Projects.*** The currently proposed projects have an estimated yield of 1,390 multi-family units, along with 1.85 million square feet of commercial uses (office and light industrial). These "yields" are those of Alternative 5 for Specific Plan Zone 1. They have been presented because at the time of preparation of the Bailey Estates DEIR, the City had not adopted, but desired, a higher number of units within Zone 1 than was approved by the County.

In addition to the projects listed above, new developments are occurring throughout the City of Pittsburg and other nearby communities. These more regional projects add to through traffic on SR4 and represent additional demands on public services and utilities. Table 5-1, on the following pages, lists the cumulative projects of this type in the City of Pittsburg.

Geology/Soils/Seismicity

Impacts on geology and soils are generally localized and do not result in regionally cumulative impacts. Specifically, there are site-specific geological hazards (e.g., landslides, liquefiable soils, expansive soils). Remediation of these geologic hazards doe not have any cumulative impact on other parcels in the area. The only impact from the proposed project that could potentially be cumulative would be erosion impacts. However, implementation of Mitigation Measures 4.2-5A through 4.2-5D and Mitigation Measure 4.3-3 will reduce the project's contribution to this cumulative impact to a less-than-significant impact both on-site and off-site. Therefore, there are no significant cumulative impacts that would result from the development of Bailey Estates, along with other cumulative projects.

Table 5-1
City of Pittsburg Master Project List
(June 2003)

SINGLE-FAMILY RESIDENTIAL

PROJECT	NUMBER	UNITS	ACRES	LOCATION	STATUS
Bancroft Gardens	RZ-02-16, SUB 8657	22	4.07	Western terminus Wedgewood Drive	Pending (CEQA Review)
Brickyard/Americana	GP-94-02, RZ-94-19, SUB 7905; VA-94-07, DR-94-12; SUB 8207	193	43	South of North Parkside Drive & East of East Catamaran Drive	Built
Cardinale Terrace	SUB 8693, DR-02-39	10	0.95	302 East Third Street	Under Construction
East Street Estates	UP-00-01, DR-00-05, VA-00-01; SUB 8409, VA-00-03	8	0.63	855 East Street	Approved
Evergreen Estates	VA-94-06, DR-94-08; VA-96-02	46	20	Bailey Road at West Leland Road	Built
Harbor Lights (formerly Regency Estates)	RZ-00-01, DR-00-11	253	46.3	1001 Willow Pass Road	Under Construction
Herb White Way Homes	MS 676-01, UP-01-08, VA-01-02, DR-01-12	13	1.2	Herb White Way, between West Eighth and West Tenth Streets	Under Construction
Heritage Pointe	GP-02-02, RZ-02-12, SUB 8625, DR-02-18	125	22	Builders Circle	Approved
Highlands Ranch	GP-97-02, RZ-97-04, SUB 7217; DR-98-16	600	174	Buchanan Road & Meadows Avenue	Under Construction
Jubilee	GP-94-01, RZ-94-01, SUB 7885	51	9.5	West of Railroad Avenue, north of Buchanan Road	Built
Lawlor Estates	SUB 8112	50	10.8	West Leland Road, west of Bailey Road	Pending
Marina Walk	RZ-98-03, DR-98-04	120	23	NW of Black Diamond & West Eighth Streets	Built
Montreux	GP-99-01, RZ-99-01, SUB 8279	154	147	West of Kirker Pass Road	Pending
Oak Hills Crest	DR-97-16, SUB 8080	29	4	North of Whispering Oak Circle	Under Construction
Oak Hills South (Three phases)	SUB 5631	442	87.3	West Leland & Bailey Roads	Built
Oak Hills South	GP-91-02, RZ-92-06; SUB 7745	459	211	South Vineyard Court	Built
Oak Hills South Unit 5	GP-96-05, RZ-96-05, SUB 8042; GP-99-04, RZ-99-05; DR-01-09	245	53	Oak Hills Drive between West Leland & Southwood Roads	Built
Park Place	RZ-02-10, SUB 8653	40	3.5	Montezuma & West Thirteenth Streets	Approved
Railroad Terrace	RZ-02-09, SUB 8642, DR-02-15	16	1.3	East Third Street, east of Cumberland	Under Construction
Ridge Farms	SUB 8613	243	76	Southwestern City limits	Pending
Rockridge	DR-95-03, SUB 7733	56	7.6	NE East Leland Rd and Harbor St	Built
San Marco	SUB 7362; DR-00-26; VA-00-01; DR-01-10; DR-02-23; DR-02-24	1,363	415	South of Hwy 4 at Willow Pass Road	Under Construction
Sky Ranch	RZ-02-21, SUB 8475, DR-02-48	386	166.5	Buchanan Road, west of Somersville Road	Pending (CEQA Review)
Stonegate	SUB 7892	27	6.96	East side of Buchanan Road	Built

TABLE 5-1 *(continued)*

Village at New York Landing	DR-92-06	114	26.99	Eastside Redevelopment Area, east of Cumberland	Built
Willow Heights	GP-01-01, RZ-01-03, DR-01-42, SUB 8605	120	16.5	North Parkside Drive, west of Andrew Avenue	Approved

APARTMENTS/CONDOMINIUMS

PROJECT	PERMITS	UNITS	ACRES	LOCATION	STATUS
Columbia Park Manor	GP-94-03, RZ-94-03, MS-95-676, DR-94-05	78	3.2	1760 Chester Drive	Built
Cornerstone Apartments (formerly Atlantic Avenue Apartments)	GP-97-04, RZ-97-06 DR-97-21	204	9.08	NW corner Harbor Street and Atlantic Avenue	Built
Creekside Village Senior Apartments	RZ-00-04, DR-00-19	88	6.22	5375 Railroad Avenue	Under Construction
Delta Hawaii Senior Apartments	UP-02-29, DR-02-41	24	1.08	NW corner, Harbor Street and Stoneman Avenue	Pending
Oak Hills Apartments	GP-86-01, UP-86-24, UP-86-24, AR-86-27	262	17.2	2201 Oak Hills Circle	Built
Pittsburg Park Apartments	DR-97-12	76	5.46	2161 Crestview Drive	Built
Presidio Village	GP-99-03, RZ-99-04; DR-00-08	104	2.63	Presidio Lane	Under Construction
San Marco	SUB 7362	1,575	34.0	South of Hwy 4 at Willow Pass Road	Approved
Stoneman Village	DR-92-15	60	1.45	390 East Leland Road	Built
Woodland Hills II	GP-97-03, RZ-97-06 DR-97-20	96	4.93	West of Kirker Pass Road, north of Castlewood Dr	Built

COMMERCIAL

PROJECT	PERMITS	SQ FT	ACRES	LOCATION	STATUS
Albertson's Shopping Center	UP-97-13, UP-97-14 DR-98-05	76,109	9.0	2100 Railroad Ave	Built
American Auto Body	UP-02-34, DR-02-47	22,400	2.9	East of Markstein Drive, North of North Park Blvd	Under Construction
Arco Service Station	RZ-01-05, MS-670-01, UP-01-32, DR-01-59	4,200	1.38	1190 East Leland Road	Built
Auto Zone	GP-99-02, RZ-99-02; DR-00-01	5,400	0.86	401 East Leland Rd	Built
Brenden Theatres Expansion	UP-96-01, DR-96-01	9,000	44.0	4085 Century Blvd	Built
Century Plaza	ADR-87-07; DR-01-13	439,830	50.0	Century Blvd at Somersville Rd	Built
Century Plaza II Subdivision	SUB 8177		21.93	South of Century Blvd, North of SR 4	Under Construction
Century Plaza III Subdivision (Auto Mall)	UP-98-01, SUB 8161; DR-01-14		47.6	South of Century Blvd, North of SR 4	Under Construction
Century Plaza Lineshop Addition	DR-00-21	11,985		4645 Century Blvd	Built
Circuit City	DR-01-29	32,900	3.52	4300 Delta Gateway Blvd	Built
Del Taco	UP-01-13, DR-01-24	2,798	0.74	4490 Delta Gateway Blvd	Built
Faith Worship Center	UP-02-04, DR-02-07	17,500	1.8	579 Garcia Ave	Approved
Fire Station #84 and Administration Center	UP-02-20, DR-02-29	10,942	1.62	East side of Railroad Ave at Civic Avenue	Approved
Fire Station #85	DR-02-30	5,887	0.87	East side of Loveridge Rd north of E. Leland Rd	Approved

TABLE 5-1 *(continued)*

Fire Station #87	UP-98-30, DR-98-26	5,250	1.0	West Leland Rd	Built
In-N-Out Burger	UP-01-30, DR-01-58	3,220	1.0	4500 Delta Gateway Blvd	Built
Krispy Kreme Doughnuts	UP-01-14, DR-01-26	3,975	0.9	4444 Delta Gateway Blvd	Built
Latter Day Saints Meetinghouse	UP-02-09, DR-02-08	24,460	4.9	3100 Harbor Street	Approved
Loveridge Commercial Center	RZ-01-02, SUB 8587, UP-01-19, UP-01-20, UP-01-21, UP-01-22, UP-01-23, DR-01-32, DR-01-33, DR-01-43, DR-01-44, DR-01-45	314,765	16.2	North of California Avenue, west of Loveridge Road	Under Construction
Loveridge Center Starbucks	UP-02-19, DR-02-27	6,000	0.83	North of California Avenue, west of Loveridge Road	Approved
Mazzei GMC	DR-02-42	52,763	7.0	3800 Century Way	Approved
Miller Mixed Use Building	VA-01-04, DR-01-48	3,636	0.12	158 East Sixth Street	Built
North Park Plaza	DR-91-06, DR-96-09	361,952	32.8	2000 thru 2400 North Park Blvd	Built
Popeye's Chicken and Biscuits	UP- DR-				
Pittsburg Towne Center Remodel and Walgreen's	DR-02-18, VA-02-01; MS-676-02, DR-02-43	14,490 (new) 78,020 (remod el)	6,7	2900 thru 3000 Railroad Avenue	Under Construction
Security Public Storage	RZ-02-18, VA-02-02, UP-02-27, DR-02-38	78,200 (add'n)	7.8	501 Harbor Court, 701 Bliss Avenue	Approved
Spectrum Center School	UP-99-09; DR-99-11; UP-01-02, DR-01-04; DR-01-62	7,116 w/ 18,925 (add'n)	2.28	135 East Leland Rd	Completed; Expansion under construction
Taco Bell/Pizza Hut	UP-02-10, DR-02-09	2,917	0.73	4470 Century Blvd	Built
Winter Chevrolet	UP-02-25, DR-02-33	43,889	6	3750 Century Court	Under Construction
Winter Honda	UP-02-24, DR-02-32	28,602	3	3850 Century Court	Under Construction
7-11 Convenience Store and CITGO Gas Station	UP-01-03, DR-01-16	2,940	0.92	4600 Delta Gateway Blvd	Under Construction

INDUSTRIAL

PROJECT	PERMITS	SQ. FT.	ACRES	LOCATION	STATUS
Bishop Wisecarver Corporation Building Expansion	UP-02-11, DR-02-10	36,412	10.1	2104 Martin Way	Under Construction
Delta Energy Center	VA-99-03			Arcy Lane	Built
DOW Chemical Hygiene Building	AD-96-02	5,088	7.1	Loveridge Road	Built
Los Medanos Energy Center	VA-99-04			East Third Street, east of Harbor St	Built
Los Medanos Industrial Park II	UP-98-07, DR-98-02	11,800	5.0	Martin Way	Built
Merit USA	DR-94-01	2,700	1.8	554 Clark Avenue	Built
Pittsburg Marine Terminal	UP-95-05, VA-95-02 DR-95-08		17.5	707 & 750 East Third Street	Built
Pittsburg Marine Terminal Bulk Storage Building	DR-01-02	123,450	17.5	707 East Third Street	Approved
Praxair	DR-99-01, AD-99-01		18.9	2000 Loveridge Road	Built
Praxair Distribution Package Gas Filling and Support Center	UP-01-27, DR-01-47	48,800	3.5	1900 Loveridge Road	Built
Recycling Center and Transfer Station	VA-94-01	167,000	11.0	1300 Loveridge Road	Built

TABLE 5-1 *(continued)*

List of Abbreviations of Permits:

AD (ADR) Administrative Design Review
(Approval or Denial by Planning Staff)
DR (AR) Design/Architectural Review
(Approval or Denial by Planning Commission)
GP General Plan Map Amendment
MS Minor Subdivision
RZ Zoning Amendment
SUB Major Subdivision
UP Conditional Use Permit
VA Variance
ZA Zoning Administrator Hearing

Other Abbreviations:

CC City Council review and/or action
PC Planning Commission review and/or action
EIR Environmental Impact Report
CEQA California Environmental Quality Act

Source: City of Pittsburg Planning and Building Division, June 25, 2003.

Drainage/Water Quality

According to the City's General Plan, it appears that additional development within the Lawlor Creek watershed can only occur within two areas. The first consists of approximately 10 acres that straddle the stream channel, immediately south of West Leland Road. It is assumed the creek itself could not be developed, so it is likely that no more than 8 acres could be developed with medium density single-family homes or low density apartments. The other area is the neighborhood located north of SR4 and the East Bay Municipal Utility District (EBMUD) right-of-way, where there may be some empty parcels available for infill development. These would not be expected to significantly change the immediate area's existing runoff characteristics, so there should be little direct affect on peak flow rates or existing flooding conditions.

Discharges from point sources to the waters of the United States are regulated by the RWQCB through the establishment of limitations that are required to be followed by dischargers to manage effluent and emission concentrations of contaminants. The bases for discharge and emission limits and requirements include the Federal Water Pollution Act, Federal Code of Regulations: Title 40, San Francisco Water Quality Control Plan, California Toxics Rule, National Toxics Rule, State Implementation Policy, USEPA Quality Criteria for Water and the Ambient Water Quality Criteria for Bacteria. Discharges to San Francisco Bay are regulated under waste discharge and air emission requirements that are determined based on water quality standards.

Because there is so little developable area remaining in the watershed, it is not expected the proposed project would contribute to cumulative stream flow more than already described for the project . It would contribute to a cumulative impact on water quality within San Francisco Bay, though, since Lawlor Creek is just one of many streams and drainage areas throughout the region that are discharging eroded soils and urban pollutants to the Bay.

Transportation/Circulation

Buildout of the General Plan, in combination with regional growth, would contribute to congestion along major roadways in the Pittsburg area. Continued growth within Pittsburg and Contra Costa County would attract significantly more vehicle trips, many of which would be made via regional routes (for example, State Route 4, Leland and Bailey Roads). Several regional routes run through the City, and would be affected by through traffic to expanded development outside the immediate Pittsburg area.

Traffic conditions along SR4 will be influenced by development occurring throughout the County, not just development in the immediate Pittsburg area. Therefore, it is necessary to examine overall growth trends within the region. Significant increases in population and jobs within adjacent cities will contribute to heavier traffic congestion along the state highway. The job growth projected under the adopted Pittsburg General Plan will also contribute to cumulative traffic impacts, and would therefore be potentially significant. Proposed transportation improvements that will help alleviate traffic congestion in and around the City include:

- widening of SR4 to 6 lanes, plus 2 high occupancy vehicle (HOV) lanes;
- extension of West Leland Road to Avila Road;
- construction of proposed San Marco Boulevard from SR4 to Bailey Road;
- construction of proposed Buchanan Road Bypass;
- construction of proposed Range Road / State Route 4 overcrossing/interchange; and
- BART rail extended east along SR4, with construction of proposed Railroad Avenue BART Station.

While these improvements will increase options for travel and help alleviate peak congestion, they would not absorb the entire increase in vehicle trips that would result from new development under the General Plan and other adjacent projects. The cumulative transportation impacts are discussed in detail in Section 4.4.

Noise

The proposed project, together with proposed and planned future development in the Southwest Hills and in the area in general, could result in a cumulative increase in noise levels. This impact is less than significant. There are no other approved or proposed projects in the vicinity of the site that would lead to cumulative noise impacts. Therefore, Bailey Estates' less-than-significant individual impacts would also be a less-than-significant cumulative impact.

Air Quality

BAAQMD guidance for CEQA documents provides that any project found to have a significant air quality impact would also be considered to have a significant cumulative impact. For a project that does not individually have a significant impact, the cumulative impact analysis should consider the combined effects of the project and past, present and reasonably anticipated future projects.

With respect to local air quality impacts, Table 4.6-3 presents calculations of curbside concentrations of carbon monoxide emissions at two key intersections, and Table 4.6-4 calculates project-related vehicle emissions for reactive organic gases, nitrogen oxides and particulate matter (PM_{10}). Although these air quality effects of the project are less than significant, they represent a cumulative environmental impact of the project.

Additional vehicle trips resulting from increased population would contribute to the emission of harmful pollutants (carbon monoxide, particulate matter, and ozone precursors). Additional urban growth through the region contributes to higher air pollution levels within the total air basin. While the General Plan provides policies targeted at minimizing auto emission pollutants, impacts will still be considered significant. Nevertheless, the *Final Environmental Impact Report for the City of Pittsburg General Plan 2020* concludes that anticipated cumulative development within the City, which would include the proposed project, would have a significant impact on regional air quality, specifically emissions of ozone precursors and particulate matter.

Public Services/Utilities

The local schools serving the project site are essentially experiencing insufficient capacity as identified in Table 4.7-1. Cumulative development significantly impacts local schools unless new facilities are constructed as identified on Table 5-2. The total number of estimated students that would exceed capacity is 1,628. The applicant/developer will be required to pay school impact fees to help offset the cost of constructing new school facilities.

Table 5-2
Cumulative School Capacities

School	Capacity*	Buildout Enrollment (without project)	Project-related Enrollment	Buildout Enrollment (with project)	Insufficient Capacity
Bel Air and San Marco Elementary	1,509 students	1,874 students	112 students	1,986 students	Over capacity by 477 students
Riverview Middle School	893 students	1,527 students	62 students	1,589 students	Over capacity by 696 students
Mount Diablo High School	1,769 students	2,102 students	65 students	2,167 students	Over capacity by 398 students
Total	4,114 students	5,170 students	239 students	5,409 students	Over capacity by 1,628 students

* Assumes construction of San Marco Elementary School.

Source: Mount Diablo Unified School District, May 2001 and May 2003.

The construction of the Bailey Estates project, in combination with other foreseeable projects requires a broad range of public services and utilities (i.e., fire protection, police protection, schools, parks, garbage collection and other community services). Additionally, these projects require facilities for delivery of domestic water, wastewater treatment, electrical service, natural gas, telephone service and cable television service. To the extent that these future cumulative developments provide the necessary tax base or other compensation to support the provision of necessary additional services and facilities, the potential impacts would be mitigated to less than significant.

Biological Resources

Proposed development on the site would contribute to cumulative impacts on biological and wetland resources in the south Pittsburg vicinity. Recently approved and anticipated development in the hills of south Pittsburg would eliminate grassland habitat and further fragment the grassland-dominated habitat of the area. Anticipated development could affect essential habitat for a number of special-status species, including California tiger salamander, California red-legged frog, San Joaquin kit fox, and several special-status plant species. New development and the proposed

arterial street alignment which would intersect with Bailey Road just north of the site could affect wetlands, including possible filling of several drainages and seasonal wetlands on valley floors. Because of its location along the crest of the hills in south Pittsburg, development of the site would form a barrier to movement of wildlife through the surrounding undeveloped lands, which are designated as open space in the General Plan.

Cultural Resources

Based upon the written documentation from previous cultural resource surveys and research, it has been established that prehistoric and historic peoples have inhabited the San Francisco Bay region of California for many thousands of years. Although unlikely, proposed development of Bailey Road Estates could contribute to the potential loss of previously unknown significant cultural resources, both historic and prehistoric. However, with proper planning and appropriate mitigation, such as CEQA-mandated assessment and recovery of resources should they be discovered, the resource can be preserved through recovery of information and subsequent dissemination of that information to other researchers. It can also provide opportunities for increasing our understanding of the past environmental conditions and cultures.

Visual Resources

The City has designated various ridgelines to be retained in open space, but as development occurs within the Southwest and Southern Hill area of the city, views of the hills will be altered when seen from lower elevations. Development of the project site would contribute to this cumulative loss of visual resources. Mitigation measures recommended for the proposed project would help to reduce this impact.

5.4 GROWTH-INDUCING IMPACTS

The project could be considered growth inducing given its location away from the developable portions of the City. The topography and legal constraints of the Concord Naval Weapons Station blast zone easement separate the site from areas currently under development in the southwest hills area of the city. The northern project site boundary does abut the City's municipal boundary and sphere of influence line. The site also has been considered within the City's planning area in the General Plan. Development of the site will require extension of public utilities, such as water and sewer services. Given the constraints of the blast zone easement it is unlikely that development would occur to the west and south of the project site in the near future. However, if the easement is withdrawn, lands west of the site could become available for development opportunities. However, it is speculative to assume that this land will be developed. A well-planned and properly conditioned project that complies with the provisions of the Pittsburg General Plan and Municipal Code would not be growth inducing.

5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines require a Draft EIR to consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely" (CEQA Guidelines Section 15126(c)). "Nonrenewable resources" refer to the physical features of the natural environment, such as land, air, waterways, etc.

Open Space

Implementation of the project would result in the loss of habitat and conversion of range land for urban use. The rural nature of the Bailey Road corridor would be permanently altered. Development would preclude use of the site for other future beneficial uses, such as regional parkland that could possibly be tied in with the Naval Weapons Station land when it is decommissioned and becomes available for nonmilitary purposes.

Development of vacant sites throughout the City and within the southern hills would result in the conversion of open land to urban uses. The development of infill sites would not constitute the loss of open space, because most sites are already surrounded by existing urban infrastructure and development. Development within the southern hills will entail disruption of rangeland for cattle grazing, a small portion of agricultural land with local importance, and smaller, intermittent riparian habitat and wetlands.

Air Quality

The proposed project would result in significant irreversible impacts on air quality. Long-tern use of automobiles throughout the region can lead to the accumulation of carbon monoxide (CO) in the atmosphere, a major contribution factor to global warming. Increases in vehicle trips and traffic congestion resulting from the proposed project would potentially contribute to long-term degradation of air quality and atmospheric conditions in the Bay Area, California, and the western United States.

Ground-level air pollution, while significant, is not an irreversible impact. Ground-level air pollution in the Pittsburg area that results from automobile emissions can be reduced through improvements in fuel efficiency and the shift from internal combustion to electric engines. In addition, roadway improvements that increase roadway capacity and reduce overall congestion can help reduce street-level air pollution, because cars waiting in traffic (with intermittent accelerations and decelerations) emit more pollutants than cars traveling in free-flow conditions.

Energy Sources

New development would also result in the commitment of existing and planned sources of energy, which would be necessary for daily use of new structures. Both residential and non-residential development use electricity, natural gas, and petroleum products for power, lighting, heating, and other indoor and outdoor services. Expanded urban development in Pittsburg would result in increased energy demand, which may or may not be from renewable sources.

The increased number of trips to and from new development would also result in the commitment of additional energy sources. Automobiles consume gasoline and other petroleum products, while transit trips via electrified rail routes, such as BART, rely on electric energy from a variety of sources. Increased energy consumption for transportation would also result from expanded urban development.

Construction-Related Impacts

Significant irreversible environmental changes could also occur in course of construction of Bailey Estates. These affects include consumption of building materials, natural gas, electricity, water, and petroleum products. Due to the non-renewable or slowly renewable nature of these resources, this represents and irretrievable commitment of resources.

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[1] *City of Pittsburg General Plan 2020: Final Environmental Impact Report*, June 2001.

6
ALTERNATIVES

6
ALTERNATIVES

6.1 INTRODUCTION

CEQA Guidelines, Section 15126(d), require that an EIR describe a range of reasonable alternatives to the proposed project which could feasibly attain most of the basic objectives of the project. The applicant's objectives are as follows:

- To plan an up-scale single-family detached subdivision with large flat lots that range in size from 6,000 to 14,000 square feet as a community of significant benefit to Pittsburg and the nearby region.
- To provide housing opportunities that include an executive-style subdivision with large two-story homes, pool-sized yards, areas for gardens and play yards, and sweeping views of the adjacent hills within easy access to work, shopping, recreation and BART.
- To provide housing that will improve the area's jobs/housing balance.
- To provide adequate services to meet the needs of future residents in a timely manner.
- To encourage unique, imaginative architecture and site design that is integrated into the setting, well planned and environmentally sensitive.
- To create a community that is water and energy efficient.
- To provide substantial open space that enhances wildlife habitat and corridors, and to preserve, protect and enhance major drainages and wetlands.

The alternatives evaluation should include a range of alternatives that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially decrease the significant effects identified for the project even if these alternatives impede to some degree the attainment of project objectives or are more costly.

The CEQA Guidelines identify the following factors to be taken into account when assessing the feasibility of alternatives: general plan consistency, regulatory limitations, site suitability, economic viability, availability of infrastructure, and jurisdictional boundaries. The alternatives are to be limited to ones that would avoid or substantially lessen the significant impacts of the project, with detailed assessment given to only those alternatives that are feasible.

The alternatives are required by CEQA to include a "No Project" analysis which is to discuss existing conditions and what could reasonably be expected to occur on the site in the foreseeable future given current community plans and available public infrastructure and services. In addition, CEQA Guidelines require that an environmentally superior alternative be designated. If the alternative with the least environmental impact is the "No Project" alternative, then one of the remaining alternatives is to be designated as the environmentally superior alternative.

This analysis considers four alternatives, which are: 1) No Project—the site remains vacant; 2) Reduced Density Plan – 249 Units; 3) Applicant's Reduced Density Plan – 270 Units; and 4) Mitigated Site Plan – 171 Units. The environmentally superior alternative required by CEQA is identified and discussed in Section 6.6.

6.2 NO PROJECT ALTERNATIVE

The no project alternative would most likely continue the present use of cattle grazing until such time a development application is submitted. County zoning would permit up to a maximum of six lots (net) under the present zoning designation of 20-acre minimum lot size. If the project is annexed to the City of Pittsburg, the General Plan Land Use Designation would permit low density residential development. For purposes of this analysis, the site is considered to remain undeveloped.

This alternative would not implement the City's General Plan, nor meet any of the applicant's objectives as stated above.

Planning Policy and Land Use Compatibility

Left in its natural state, the site would not create land use compatibility issues with adjacent land uses. The zoning and general plan land use designation would most likely remain unchanged if the site is not developed, nor would the property be annexed to the City.

Geology/Soils/Seismicity

In this alternative, the site continues to serve as grazing land, wildlife habitat and watershed land. The area will continue to erode and, in exceptionally wet winter storms, portions of the existing major landslide may be mobilized and slides may occur on over-steepened slopes. However, these natural geologic processes will not result in significant impacts to people or property.

Drainage/Water Quality

If the project is not constructed, there would be no increase in on-site infiltration rates or peak rates of storm water runoff. As a result, existing flow conditions within downstream reaches of Lawlor Creek would remain unchanged. However, there would be no opportunity to modify or otherwise attenuate peak flow rates through construction of a storm water detention basin. Although the proposed project would not be required to reduce existing flow rates, it is possible that a basin could be configured to delay the peak sufficiently to improve downstream conditions.

There would be no increase in on-site soil erosion during construction, but it is expected that long-term erosion might be worse under the no project alternative. Existing channels, particularly along Bailey Road, would continue to downcut and erode, although it does not appear that large amounts of sediment currently are transported off the site into downstream reaches of Lawlor Creek. If the site continues to be used for cattle grazing, organic wastes would seep into the groundwater and run off into downstream channels. It is expected, though, that this would be less detrimental to local water quality than the proposed urban land uses, even with the recommended mitigation measures.

Transportation/Circulation

Traffic conditions would be as described under Base Conditions in Section 4.4. Buildout in the southern hills without the proposed project would continue to contribute to traffic volumes on SR4 and Bailey Road.

Noise

There would be no noise impacts under this alternative.

Air Quality

This alternative would avoid construction and operation-related air quality impacts of the proposed project. Sporadic emissions would continue to occur from infrequent truck traffic associated with ranching activities.

Public Services/Utilities

There would be no impact on existing public services/utilities. The County Sheriff's Department would continue to conduct patrols in the vicinity and respond to calls. The Fire District must also serve the site if an emergency occurs, although the level of service required is minimal compared to the original 319-unit project.

Biological Resources

No sensitive biological or wetland resources would be affected under this alternative as the proposed project would not be implemented. This includes retention of the existing California tiger salamander estivation habitat and the entire wetland complex in the northeastern corner of the site. Disruption of wildlife movement through the hills of south Pittsburg, identified as a significant unavoidable impact of the project, also would not occur under this alternative. Cattle would presumably continue to graze the property, and contribute to degradation of the wetland complex. The proposed wetland enhancement opportunities, and creation of a new breeding pond for California tiger salamander and California red-legged frog would not occur under this alternative. While the enhancement and mitigation improvements proposed as part of the project may be of benefit to special-status species, this alternative would be the environmentally superior alternative from a biological perspective, as the adverse impacts of the project on sensitive resources and wildlife connectivity would not occur.

Cultural Resources

There would be no impact on cultural resources.

Visual Resources

The visual resources would not be altered if the site remains undeveloped.

6.3 REDUCED DENSITY ALTERNATIVE – 249 UNITS

The Reduced Density Alternative (249 Units) is presented on Figure 6.3-1. This plan indicates 249 single-family units. This is a reduction of 70 lots from the 319-unit Project (22 percent reduction in lot yield). The portion of the site utilized for residential lots and streets is reduced from approximately 73.8 to 60.8 acres (18 percent reduction). Key features that characterize this alternative include:

- Elimination of lots in the north portion of the site;
- Single loading on minor streets that present long- and medium-range views to the north;
- A four-lane arterial street (Street N) with a 100-foot-wide right-of-way that extends from Bailey Road to the western boundary of the site; and
- A 2-acre neighborhood park indicated in the interior of the site. It is of a size that meets the City's expectations for a project-serving neighborhood park. Improvement plans for the park would be developed during the subdivision approval process.

The new alternative provides a 2-acre improved park, which implements the General Plan (see Figure 3-2), and San Marco Boulevard is shown extending to Bailey Road through the project site. The alignment shown in Figure 3-4 passes immediately north of the proposed Bailey Estates residential lots. However, City staff have indicated that road alignments shown on General Plans are "general," and that given the topographical constraints of that conceptual alignment, the design of Bailey Estates should keep the option open for the San Marco Boulevard connection to pass through the site. Furthermore, the General Plan provides for *Low Density Residential* use of the lands west of the site, if the blast zone easement was removed. Stubbing out a collector or arterial street at the west boundary of the site provides a potential ingress/egress point for this future development area, irrespective of the ultimate alignment of San Marco Boulevard.

Due to the scale of Figure 6.3-1, lot numbers and street names are difficult to read. Figure 6.3-2 presents an enlargement of the residential portion of this alternative. This plan does not show topography or grading, but it does identify lot numbers, road designations and pad elevations. To provide information on the proposed road improvements associated with this alternative, a series of typical sections is presented on Figures 6.3-3 through 6.3-5. Briefly summarized, Figures 6.3-3 and 6.3-4 present Bailey Road sections, which are labeled A-A through D-D. (The lines of section are presented on Figure 6.3-1.) Section D-D shows the relationship of Bailey Road to a channel that will convey concentrated runoff from the residential project to the detention basin. This "swale" is a rock-lined, trapezoidal channel with a bottom width of 6 feet. It is intended to function as an engineered "grassy swale."

Figure 6.3-5 shows the proposed dimensions of the internal streets within Bailey Estates. Note that Street N is to have 56 feet of pavement within a 100-foot-wide right-of-way. This is the improvement standard for an arterial street. Because of the potential for Street N to be extended westerly in the future, this alternative would include 6-foot-tall sound barrier walls. It is anticipated

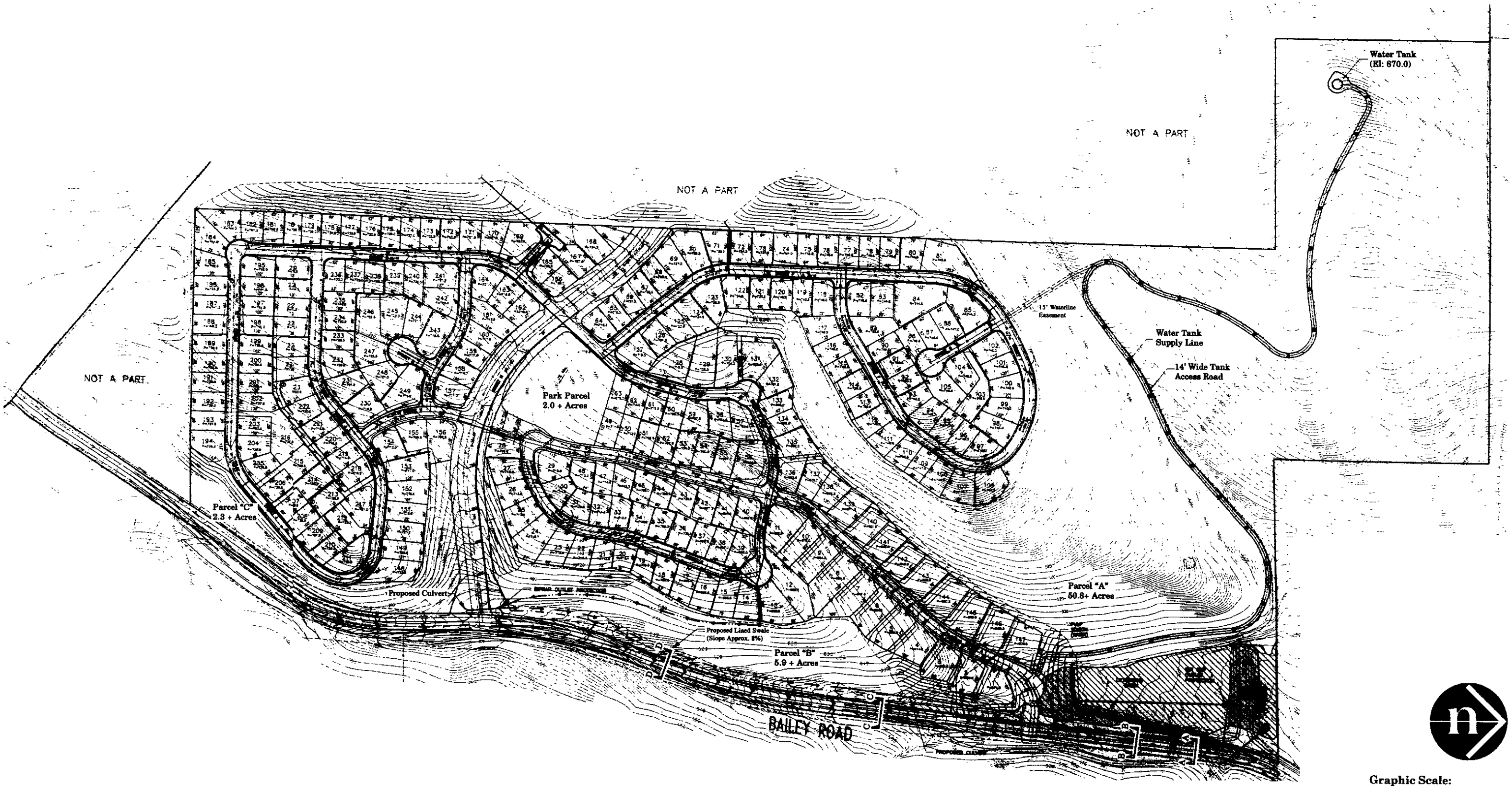
that the walls would extend along the Street N frontage from the area of the Street H intersection to the west property boundary. The dimensions of the other streets shown in Figure 6.3-5 are generally consistent with City standards for residential streets.

Figure 6.3-6 provides infrastructure detail. Specifically, it shows the storm water detention basin, the water reservoir site, and the service road that connects the water reservoir with Street A in Bailey Estates. Features shown on this figure may be summarized as follows:

- Grading for the detention basin is limited to 1) construction of a control structure that includes a primary spillway and an emergency spillway; 2) construction of an embankment along the Bailey Road frontage of the detention basin; 3) construction of the Street A intersection with Bailey Road at the south terminus of the basin; and 4) construction of a low flow channel on the floor of the basin. (The remainder of the basin is to be retained as ungraded wetland.)
- Grading for the 14-foot-wide service road is shown that links the water tank site with Street A (near the Bailey Road intersection). The road is to be paved and have a maximum gradient of less than 20 percent. The graded slopes (shown with shading) is the "civil earthwork" associated with road construction. The actual extent of grading will have a somewhat larger footprint due to the presence of two landslides (see Figure 4.2-6). By use of special construction techniques (e.g., reinforced earth), long-term stability can be achieved with earthwork confined to the immediate area of the road easement.
- The pump station is proposed on the west side of the service road, opposite the detention basin.
- The water reservoir is to be a below-grade, reinforced concrete reservoir. It is anticipated that it will be approximately 20 to 25 feet tall with the top 3 feet of the reservoir (max.) exposed. The site is underlain by bedrock. Reservoir loads are unknown at this time but, based on similar structures, it is anticipated that structural load will be moderate. The service road will loop around the reservoir, and storm drainage facilities will collect runoff that falls on the reservoir site and the immediate upslope area.

Planning Policy

Although this alterative has partially reduced development on slopes of 30 percent and retains the northern drainage and wetland area, it is still only partially consistent with several of the General Plan policies cited in Table 3-1. Views of the project will continue to be seen from Bailey Road. The central and southern ridges and slopes still would be developed at the same intensity as the 319-unit Project. At a density of 2.4 units per acre that is within the County Urban Limit Line, this alternative would be consistent with the General Plan Land Use designation and Policy 2-P-95.



Source: CSW/Stuber-Stroeh
Engineering Group, Inc.
Consulting Engineers

Figure 6.3 - 1 249 - Lot Alternative

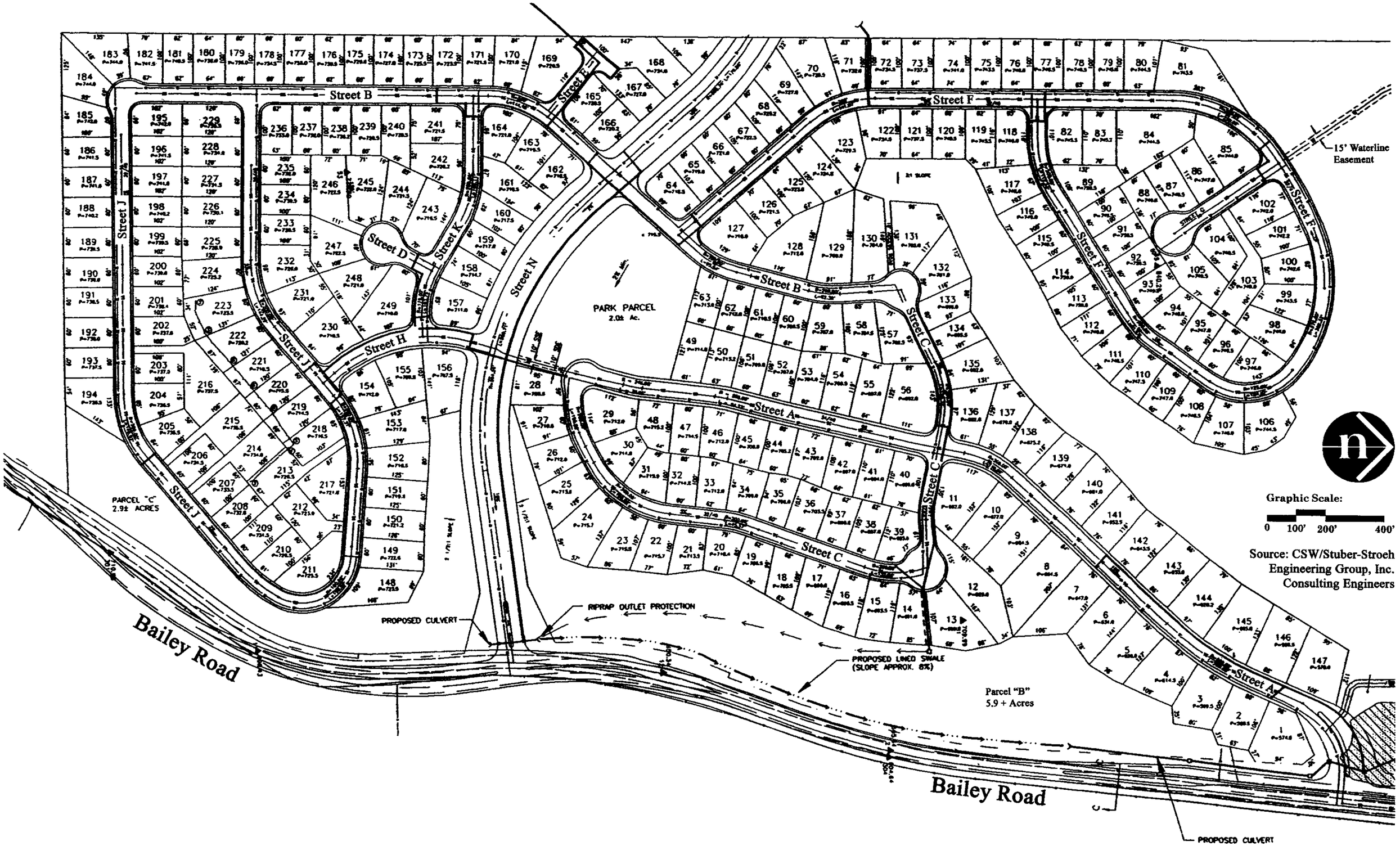
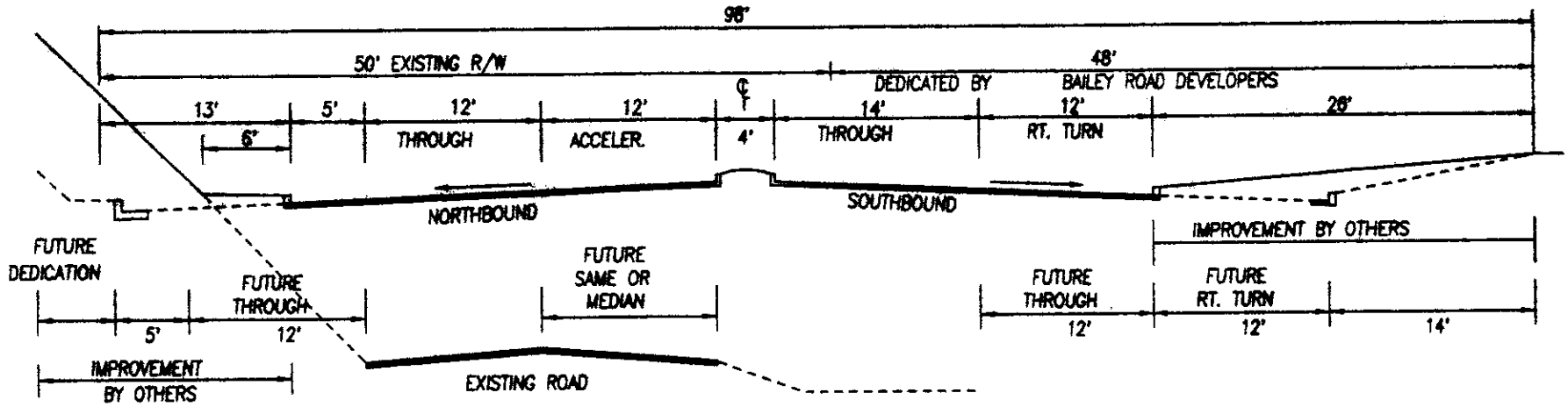
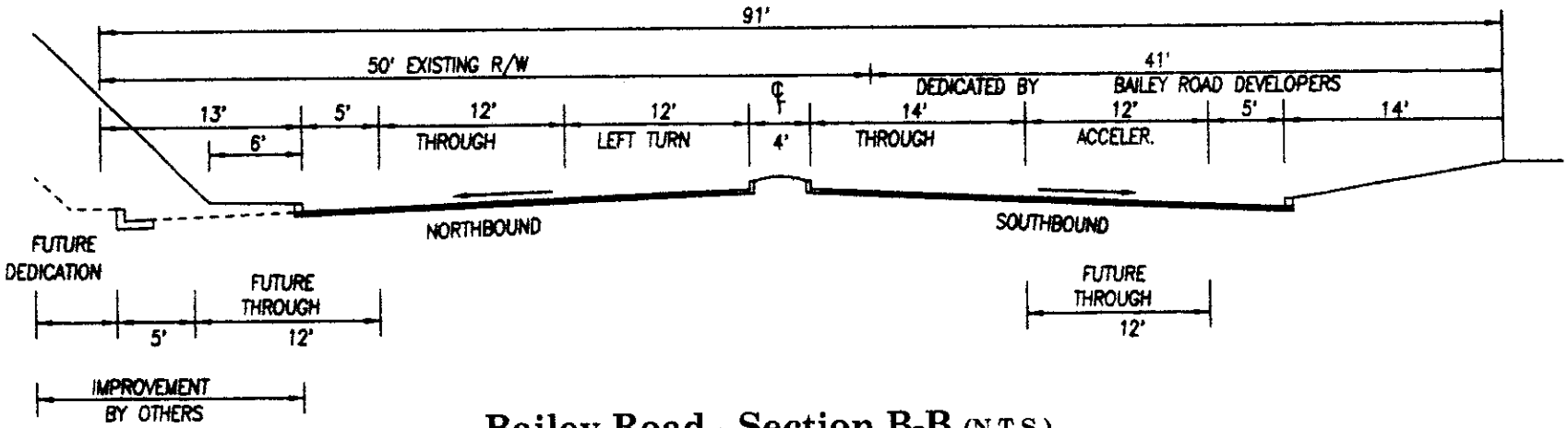


Figure 6.3-2 249 - Lot Alternative - Lot Lines & Streets



Bailey Road - Section A-A (N.T.S.)

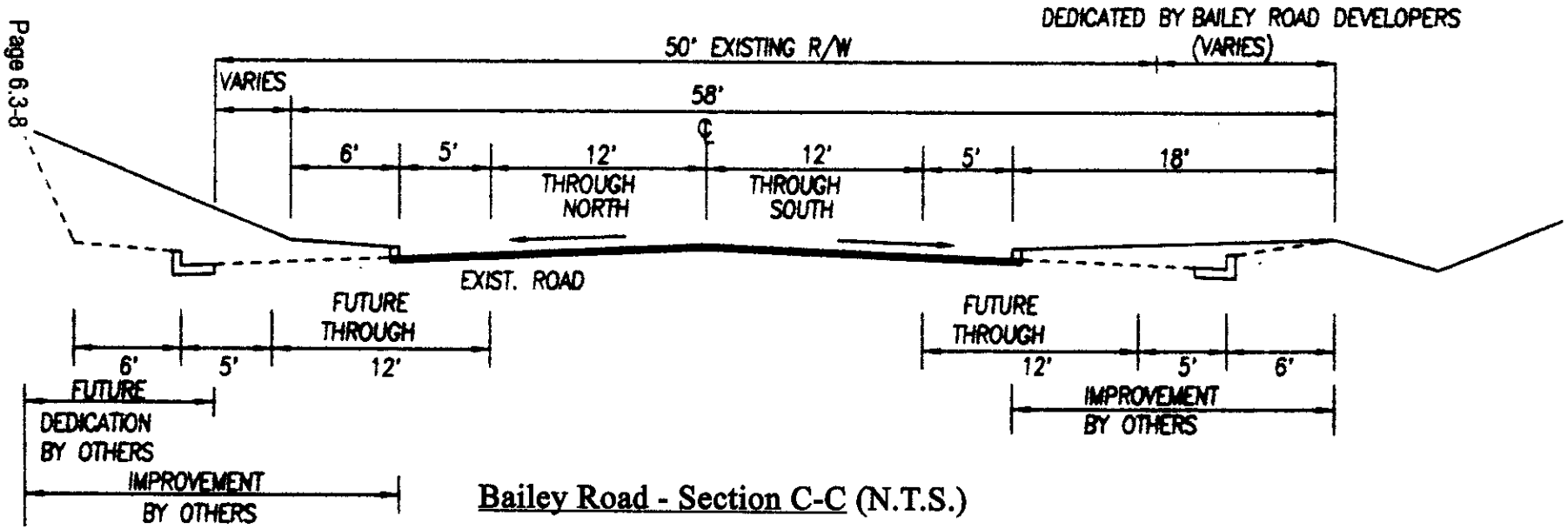


Bailey Road - Section B-B (N.T.S.)

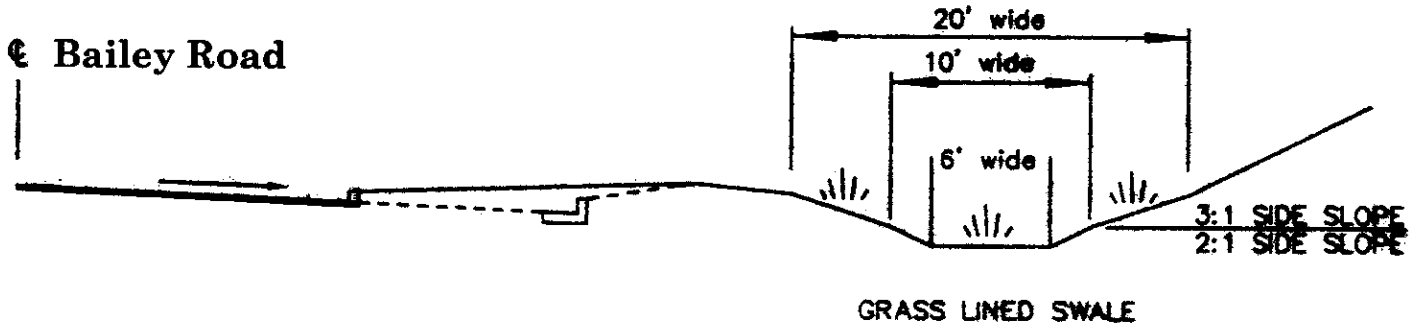
See Figure 6.3 - 1 for Location of Sections

Source: CSW/Stuber-Stroeh Engineering Group, Inc. Consulting Engineers

Figure 6.3 - 3: Bailey Road Sections A-A & B-B



Bailey Road - Section C-C (N.T.S.)

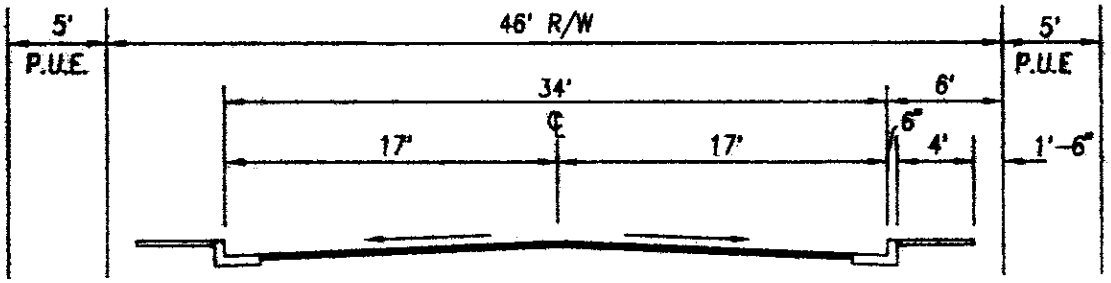


Bailey Road - Section D-D (N.T.S.)
@ Grass Lined Swale

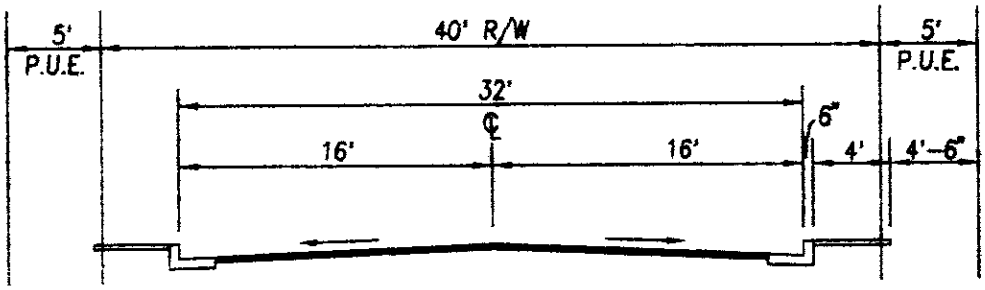
See Figure 6.3 - 1 for
Location of Sections

Source: CSW/Stuber-Stroeh
Engineering Group, Inc.
Consulting Engineers

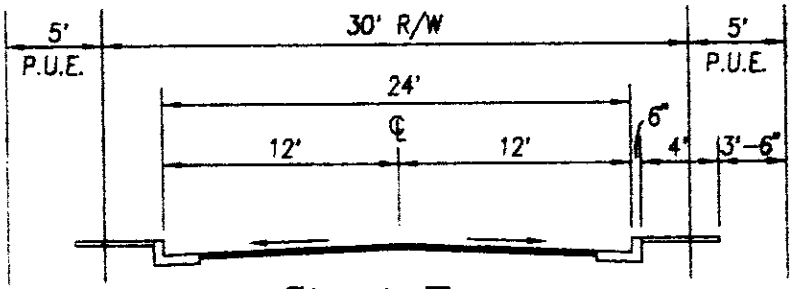
Figure 6.3 - 4 Bailey Road Sections C-C & D-D



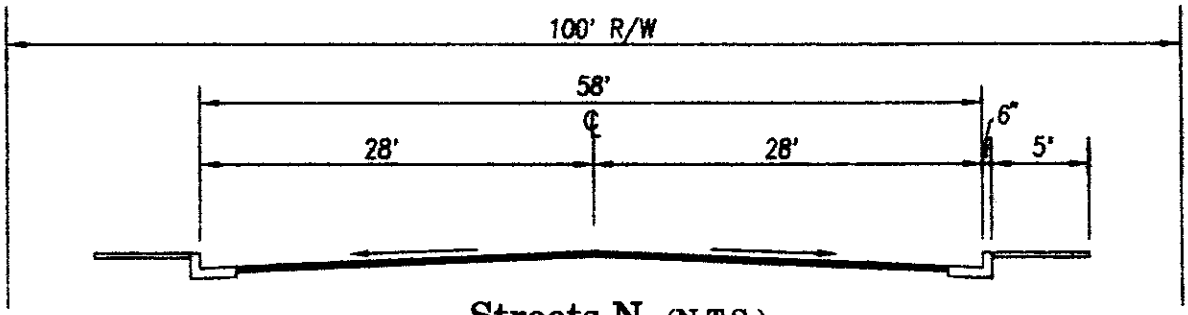
Streets A, (N.T.S.)



Streets B,C,D,F,G,H,J,K(N.T.S.)



Streets E, (N.T.S.)



Streets N, (N.T.S.)

See Figure 6.3 - 1 for Location of Sections

Source: CSW/Stuber-Stroeh Engineering Group, Inc. Consulting Engineers

Figure 6.3 - 5: Street Sections A-N

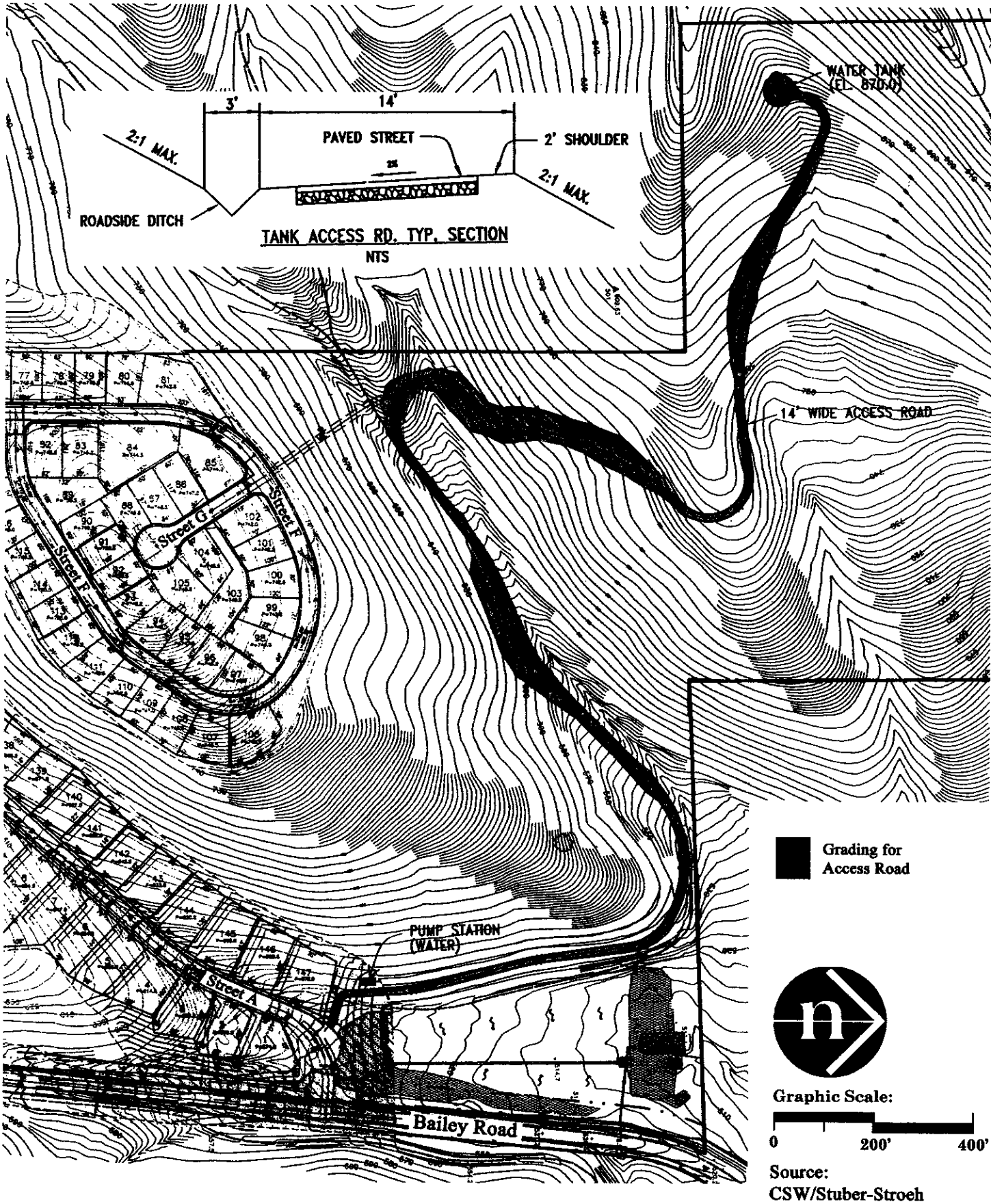


Figure 6.3 - 6: Infrastructure Detail

Land Use and Land Use Compatibility

Many of the Land Use and Land Use Compatibility impacts of the 319-unit Project remain impacts for this alternative. These include issues such as wildfire hazard, compatibility of urban development with adjacent agricultural uses, and the proximity of the site to the Naval Weapons Station blast zone easement and Keller Canyon Landfill. However, the grading and land uses have modified noise impacts. Specifically, lots adjacent to Bailey Road have had pads substantially elevated above road grade, avoiding the need for a sound barrier wall along this corridor. However, the Reduced Density Alternative (249 Units) has designed Street N to be improved to the standard of an arterial street. As Figures 6.3-1 and 6.3-2 indicate, Street N is to be stubbed-out at the west property boundary. This would allow for the possibility (in the long-term future) for Street N to be extended to serve development west of the site and/or be connected to San Marco Boulevard. To prevent the possibility of future interior noise levels exceeding CNEL 45, 47 lots would require either forced air mechanical ventilation or air conditioning to provide a habitable interior environment with windows closed.

Geology/Soils/Seismicity

Although the style of development remains similar, many grading impacts are substantially reduced. Specifically, the 319-unit Project required 2 million cubic yards of cut and a nearly identical volume of fill. The maximum depth of cut and maximum thickness of fill is virtually identical to those figures for the 319-unit Project, but with the 249-unit reduced density alternative: 1) the extent of the graded area is contracted from approximately 73.8 to 60.8 acres, and 2) the height of the graded slopes has been downscoped. The major internal slopes in the 249-unit alternative are 2.5:1 slopes that range up to 50 feet in height (on the south side of Street N near its intersection with Bailey Road), and a 2:1 fill slope that is up to 40 feet in height (in open space, at the rear of Lots 1–4 of the 249-unit alternative). Additionally, there is a proposed 30-foot-high fill slope (in the open space between Bailey Road and Lot 194 of the 249-unit alternative). Just outside the Bailey Estates project, within the blast zone easement to the west of the site, a fill slope with a gradient of 2:1 and which ranges up to 45 feet high is indicated (at the rear of Lots 169–183 of the 249-unit alternative). A cut slope with two benches is also indicated at the rear of Lots 72–80 of the 249-unit alternative. This slope has a maximum vertical height of 75 feet with a 2:1 gradient.

The 249-unit alternative includes information relating to the grading of the water reservoir and its service road (see Figure 6.3-6). This alternative shows reconstruction of the embankment on the east side of Bailey Road. The proposed fill is to be of select sandstone (i.e., granular) material. The fill is to be "keyed" into competent material and a 2:1 fill slope created that ranges up to 20 to 25 feet in height (maximum). The control structure for the storm water detention basin has a crestal elevation of approximately +518 feet, a crestal width of 20 feet, and 3:1 slope gradients on its upstream and downstream flanks.

The grading for the service road is characterized by 20-foot-high (estimated maximum) 2:1 cut and fill slopes. In the drainage swale, the service road would follow the alignment of an existing farm road; however, the service road will be paved. The service road traverses a relatively steep slope,

and segments of the road pass through or tangent to landslide deposits mapped by Engeo, Inc. The reservoir site itself has been confirmed to be within an area of bedrock, with the nearest landslide deposits mapped approximately 200 feet downslope from the reservoir.

Figure 6.3-7, Access Road Watershed Area, presents a new mitigation measure that is aimed at improving the outlook for long-term stability of the service road by intercepting runoff from a 6.15-acre area that is upslope of the reservoir site and the segment of the road from elevation +755 to the reservoir site. (This is the shaded area in Figure 6.3-7.) The runoff would be collected in a concrete-lined drainage ditch. At service road elevation +755 feet (i.e., at the eastern terminus of the shaded area shown in Figure 6.3-7), runoff carried by the ditch would be discharged into a culvert that would outfall into the drainage swale at/near elevation +640 feet. The outfall and downstream portions of the drainage swale are currently proposed to be designed to improve habitat value (e.g., grade control structures, small pools). The runoff from the 6.15 acres would add water to the swale, facilitating the type of biologic corridor that is desired. The segment of the service road from elevation +755 feet to the detention basin would be "out-sloped" to allow surface runoff to sheet flow across the road.

Regarding the segment of service road that is adjacent to/within the swale, it follows the alignment of an existing farm road and earthwork will be chiefly limited to work within the service road easement and earthwork in the upland area located south of the service road. Intrusion into the axis of the swale is limited to the area of the "switchback" at an elevation of approximately +640 feet.

Drainage/Water Quality

Proposed Drainage Provisions

An on-site storm drain system would be constructed to pick up runoff from all lots and roadways within the proposed development area. This system would be divided into three watershed subsections (see Figure 6.3-8: Drainage Areas). The storm drainage collection system for Area A would drain approximately 47 acres in the south and west portions of the development area. A single culvert in the south entrance road (Street N) would convey the collected runoff to Bailey Road, where it would discharge into an improved roadside ditch. The collection system for Area B would drain approximately 11.5 acres in the east central part of the site, with a pipe discharge to a proposed hillside channel above Bailey Road. To control its gradient, this channel would be routed south across the face of the hill, generally paralleling the contours to a discharge point just north of the south entrance road (Street N), where it would also discharge to the Bailey Road ditch. The collection system for Area C would drain only about 7 acres along Street A between Bailey Road and the Street C intersection, with a discharge to the roadside ditch more than 1,600 feet downstream (north) of the discharge point for the other two systems.[1]

The topographic map suggests that the swale south of Lots 184–189 of the 249-unit alternative will drain to the south-southeast, away from the residential project. Grading operations would eliminate two existing drainage swales that cross the site. Runoff from drainage swales west of the project

Figure 6.3-7: Access Road Watershed Area

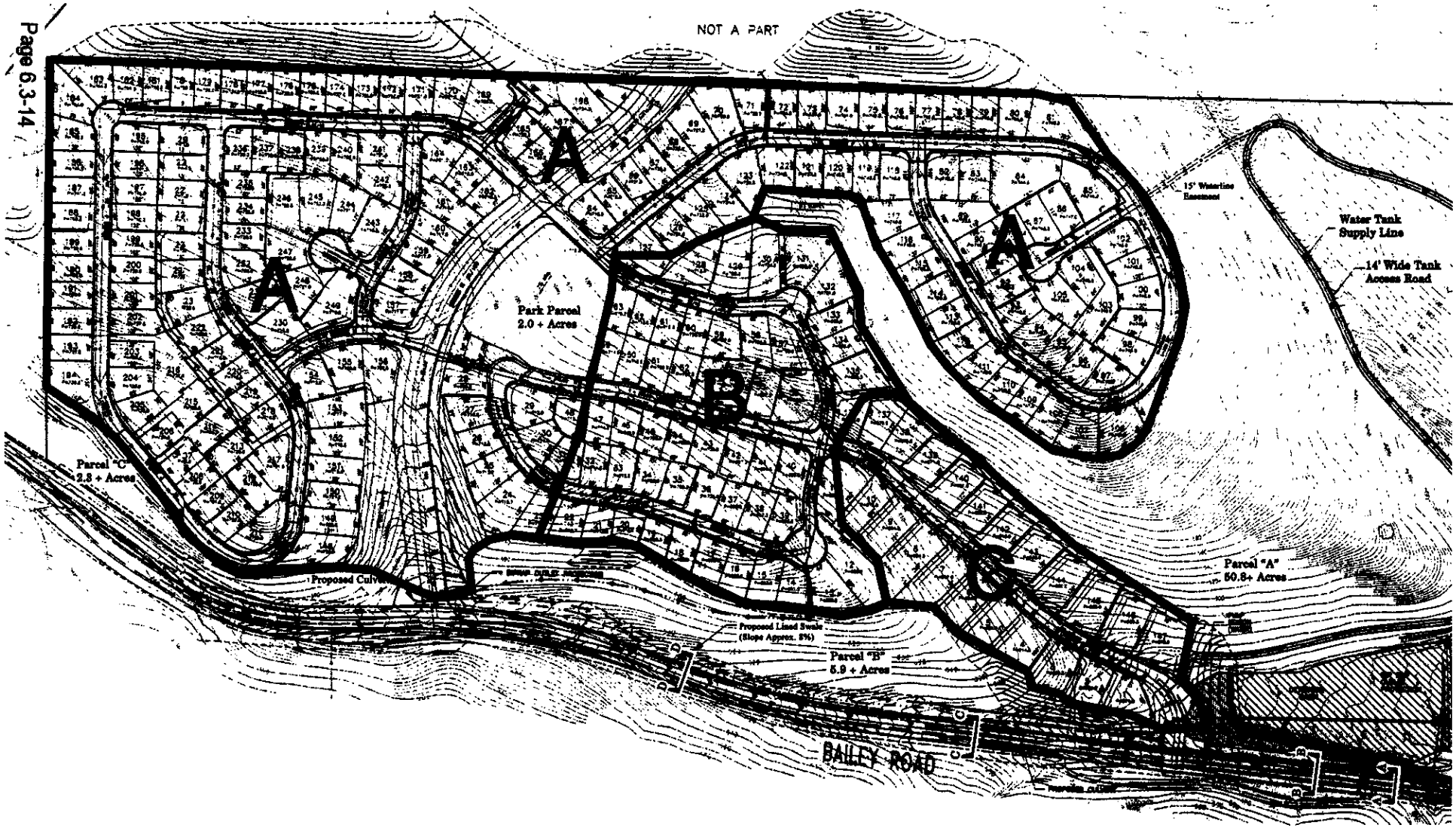


Figure 6.3 - 8: Drainage Areas

would be collected in storm drain facilities in the project. These pipes would be connected to the Area A storm drain system, routing the off-site runoff through the development area. The northernmost drainage swale would remain undeveloped, with no change in the existing natural drainage pattern that conveys runoff down to the Lawlor Creek channel at Bailey Road.

Downstream (north) of the south entrance road (Street N), the existing Bailey Road ditch would be reconstructed as a grass-lined drainage channel. This new channel would follow the general line of the existing Lawlor Creek roadside ditch, except it would be shifted west to accommodate frontage improvements to Bailey Road. In addition, an approximately 700-foot-long culvert, beginning about 530 feet south of the Bailey Road / Street N intersection, would be installed to carry the channel through a proposed fill area (east of Lots 1–4 of the 249-unit alternative). Downstream of the north entrance road (Street A), the culvert would outfall into a "low flow" channel on the floor of the proposed detention basin (see Figure 6.3-6). At the end of the basin, an outlet pipe would carry the channel under the basin's low dam for final discharge to the existing Lawlor Creek ditch at the project's northerly site boundary.

Runoff from east of Bailey Road that now enters the west side ditch through a series of cross pipes would be diverted to a single crossing, the existing 6-foot-diameter culvert located near the northeast corner of the site. This would be done to limit off-site flows through the detention basin, thereby minimizing its required storage volume. (It appears the steep topography on the east side of Bailey Road would not permit construction of a ditch to carry these flows.)

The proposed detention basin would control peak storm water discharges by temporarily storing some of the excess runoff generated by new impervious surfaces on the project site. Use of a detention basin to control runoff rates is consistent with a number of current General Plan Flood Control policies, and detention basins have been extensively used by the City, where downstream flow restrictions limit peak discharges from newly developed areas. In accordance with CCCFCWCD, design criteria for detention basins include: 1) provision of sufficient storage volume to prevent any increase in peak discharge rates during a 10-year recurrence interval storm, and 2) a discharge pipe or structure with sufficient capacity to accommodate the runoff from a 100-year storm, without use of the basin's emergency spillway. The design would include a two-stage basin, separated by a weir. The portion of the basin north of the weir would be maintained to assure the basin fulfills its flood control function. The portion of the basin south of the weir would be an undisturbed wetland and serve a water quality function.

The dam needed to create the basin would extend across the existing wetland in the northeast corner of the site, from Bailey Road to the base of the hill immediately to the west (see Figure 6.3-6). Ground elevations at the north (downstream) end of the basin would be 512 feet, and the top of the 8-foot-high dam would be substantially below the grade of Bailey Road. This height would include a maximum of 6 feet of water storage plus 2 feet of freeboard above the highest expected water elevation. The project's preliminary hydrology report indicates the basin's 30-inch-diameter outlet pipe (primary spillway) would meet the requisite design criteria. The final design will establish

whether the volume of storage is adequate. If not, the vertical height of the dam can be raised to increase storage capacity. In addition, CCCWCFCD standards require detention basins also include at least five years of sediment storage volume, based on a soils engineer's estimation of sediment generation rates within the contributing watershed. Although it is not expected there would be much erosion on the project site once development is complete, it is anticipated that uphill channels and hillsides will continue to generate sediment, some of which will accumulate in the basin. Because of the topographical and environmental constraints noted above, additional storage volume needed for sediment could be obtained by raising the crestal elevation of the dam.

The final component of the 249-unit alternative's proposed drainage system relates to the construction along the water tank access road, leading up to the northwest corner of the project site (see Figure 6.3-6). This road would be sloped into the hillside, where storm water runoff from the road and the hillside above would be collected in a roadside ditch. Because the discharge of collected runoff along the length of this road could potentially affect the stability of segments of the hillside area downslope of the service road, construction of storm drain facilities is required. Specific recommendations are provided in the Geology/Soils/Seismicity portion of this section.

Final Design

The project engineer would proceed with final design of the basin and CCCFCWCD officials would perform a final hydrologic modeling to estimate the anticipated changes in off-site (downstream) flow rates. The primary spillway, storage capacity and other parameters will be adjusted so that the basin's discharges are timed to reduce overall flow rates. It is possible these refinements would require either a larger storage capacity and/or refinement in the design of the outlet structure. Basin design would also address the need for warning and safety features, in accordance with General Plan Policy 10-P-24, if there is any potential for high flow velocities and/or deep standing water.

As previously noted, the project's preliminary hydrologic model indicates the total volume of runoff in the 350±-acre watershed would increase by only 4.25 percent during a 10-year storm. Increases of this magnitude should not be difficult to control with detention storage during 10-year and smaller storms (which is when most downstream erosion would be expected to occur), but it is recommended the final design analysis carefully evaluate all watershed parameters to ensure that both pre- and post-development conditions are being accurately characterized. Since downstream areas are already subject to flooding, and since the existing Lawlor Creek channel may be particularly susceptible to erosion and destabilization, it is important to identify the worst case conditions for design of the project's detention basin. One method of allowing the basin to control downstream flood for events such as the 2-year storm would be to elevate the primary spillway above the basin floor and allow runoff from smaller storm events to be drained by a perforated riser on the floor of the basin.

Transportation/Circulation

Widening and Improvements to Bailey Road

The Bailey Estates Original Project (319 lots) has been estimated to generate an average of 3,050 daily two-way trips with 315 vehicle trips in the peak hour. As Table 6.3-1 indicates, the 249-Unit Reduced Density Alternative would generate 2,383 trips. The project traffic would be split between two access points, and would be distributed approximately 60 percent to the north and 40 percent to the south on Bailey Road. With the addition of project-related traffic, Bailey Road would continue to operate as a two-lane roadway at an acceptable level of service (LOS) for both the 2005 and 2010 traffic conditions. This is consistent with both the Pittsburg and Concord General Plans, which assume that Bailey Road will continue to be a two-lane roadway between Myrtle Drive in Concord and Leland Road in Pittsburg. With the exception of improvements at the project frontage as proposed with the 249-unit alternative, there would be no further mitigations to Bailey Road itself that would be required as a result of the project.

Table 6.3-1

Project Trip Generation
Reduced Density Alternative – 249 Units

		DAILY 2-WAY TRIPS		AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
				INBOUND		OUTBOUND		INBOUND		OUTBOUND	
PROJECT	SIZE	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL
Single Family Residential	249 Units	9.57	2,383	.19	48	.56	139	.65	162	.36	89

Trip Rate Source: Trip Generation 6th Edition by the Institute of Transportation Engineers, 1997.
Compiled by: Abrams Associates, June 2003.

Year 2025 Cumulative Conditions

The year 2025 traffic projections for Bailey Road (Contra Costa Transit Authority regional traffic model) forecast an average of about 12,500 vehicles per day. This is consistent with the planned design for Bailey Road of one through lane in each direction. Based on these projections and with the addition of project traffic, the existing roadway does not need to be widened to four-lanes. As a general rule, a 2-lane roadway can accommodate up to 15,000 vehicles per day at LOS C operation, as long as there are limited driveways and side streets.

Frontage Improvements

As a part of the proposed 319-unit Project and the 249-unit alternative, the project frontage on Bailey Road will be improved with landscaping and a pathway. An additional lane will be added on Bailey Road for acceleration and deceleration to the project. A northbound left turn lane will

be added to Bailey Road at the southern project entrance. The 249-unit reduced density alternative calls for a right-of-way dedication of 50 feet from the current centerline for the length of the project frontage. This will be sufficient to accommodate a wider road in the future should this ever become necessary. It is more than adequate to accommodate the frontage improvements required for this project.

Traffic Signal Requirements

With the 319-unit Project, the EIR traffic study concludes that a traffic signal would be required on Bailey Road at the main entrance road to the project. For the 249-unit alternative, the project by itself would not warrant the installation of a traffic signal. However, a traffic signal would be required in the future if a new connecting roadway is completed through to San Marco Boulevard on the west. For the 249-unit alternative, the suggested mitigation measure is to require stop sign control for the existing plus project condition, and to install the traffic signal as a part of the cumulative condition mitigation measures, when future traffic volumes grow to meet the Caltrans warrants.

Noise

With this alternative, lots are eliminated along the northern portion of the property immediately adjacent to Bailey Road. By so doing, lots along Bailey Road would no longer be exposed to a CNEL greater than 65 dBA, nor would a noise barrier wall be required. A barrier would not be necessary for the remaining lots overlooking Bailey Road. (A 6-foot-tall solid wood fence or equivalent would reduce rear yard noise levels to 60 dB.) This alternative would eliminate Impact and Mitigation Measure 4.5-1 for the 319-unit Project. Forced air mechanical ventilation or air conditioning would still need to be provided for lots exposed to a CNEL of 60 or greater. These include 249-unit alternative Lots 1–7, 12–24, 64–70, 147–149, 156–162, 166–168 and 205–211.

There is the potential for San Marco Boulevard to be connected to the arterial street in Bailey Estates in the long-term future. The 249-unit alternative accommodates this by continuing Street N to the project site's western boundary and providing sufficient right-of-way to accommodate increased traffic in the future. Landscape plans prepared for the 249-unit alternative by Thomas Baak & Associates show proposed improvements to lots adjoining Street N to mitigate potential future traffic noise levels. A 6-foot-high solid noise barrier is proposed along Lot 28, Lots 64–70, and Lots 156–168 of the 249-unit alternative. These are lots that could realistically be expected to have a future noise exposure exceeding 60 to 65 CNEL. Given the proposed grading plan and the locations of the noise barriers, as shown on the referenced landscape plans, and what is known about the potential future roadway, this is a reasonable degree of noise mitigation to protect outdoor activity areas and should result in a compatible exterior noise environment for the prospective residents. The buildings themselves, particularly the upper stories, would be exposed to noise levels exceeding a CNEL of 60 dB, so mechanical ventilation is, again, recommended. It is not likely that special sound-insulating building treatments would be required to achieve the 45 CNEL interior noise level goal.

The 249-unit alternative designates the location of a detention basin, pump station, water tank, and water tank access road. Noise would be generated during construction of these infrastructure improvements and during operation of the pump station. The issue of construction noise is the same as for the 319-unit Project. No sensitive receptors are known to exist in the project vicinity within the region that could be affected by short-term construction noise, so there would be no short-term impacts. Details regarding the equipment type and specific design for the pump station are not available at this time. The proposed site for the pump station is at an elevation substantially below the elevation of the nearest proposed residential development site. Natural shielding provided by the edge of the flat-graded residential pad would substantially attenuate pump noise. It is assumed that the pump would be similar to other pump stations in the region and that the pumps would be enclosed within a building. There is the potential, nonetheless, for pump noise to be intrusive and potentially impact the adjacent future residents on Lots 1 and 147.

Air Quality

This alternative would have construction-related air quality impacts similar to those of the 319-unit Project but the frequency and duration of these impacts would be less due to the lesser amount of construction that would occur and a lesser requirement for grading and earthmoving (footprint of grading reduced by 13 acres). Impacts on local carbon monoxide concentrations would be lesser overall due to lower total trip generation (20 percent lower than the 319-unit Project). Regional air quality impacts would be about 20 percent lower than that of the 319-unit Project, and would not exceed the BAAQMD thresholds of significance.

Public Services/Utilities

The 249-unit alternative reduces lot yield by 70 (from 319 to 249 lots). This represents a 22 percent decrease in lot yield, which implies a proportionate reduction in demand for public services and utilities. For example, the 319-unit Project had a requirement of 4.52 acres of parkland based on the anticipated population of the project. The 249-unit alternative, because of the reduced project size, has a requirement of 3.6 acres of parkland. In this case, the project proponent has identified a 2-acre neighborhood park that would be dedicated to the City, with park improvements provided to meet the remainder of the project's obligation for compliance with General Plan Policies 8-P-6 and 8-P-11 through 8-P-13. With regard to public services (fire and police protection), the issues are not changed, but the reduced lot yield implies a reduction in demand for services. Similarly, utility demands are estimated to be 22 percent less than those of the 319-unit Project.

Biological Resources

The 249-unit alternative, by intent, responds to the site planning-related impacts and mitigation measures presented in Section 4.8: Biological Resources. Specifically, the Army Corps of Engineers and California Department of Fish and Game requirements and conditions of permit approval were considered in preparation of the 249-unit alternative. This alternative restricts development in the northern portion of the site, providing a movement corridor for wildlife and providing space for the enhancement of habitat in the northern drainage swale. The plan also provides for the preservation of wetland habitat within the storm water detention basin.

Although the 249-unit alternative results in a loss of approximately 60 acres of non-native grassland habitat, this loss would not in itself be considered a significant impact because of the non-native origin of the dominant species and the abundance of this community type in the project vicinity.

Finally, it should be recognized that an informal communication from the USFWS[2] indicated that this site is unsuitable for kit fox habitat, and the USFWS did not raise any concerns regarding impacts on kit fox in their Informal Consultation as part of the Section 7 authorization with the U.S. Army Corps of Engineers (Corps)[3] for the applicant's alternative project. The USFWS concluded that the applicant's alternative project is not likely to adversely affect California red-legged frog in their informal consultation with the Corps, that the shallow wetlands do not provide breeding or refugia habitat for the frog. Based on these informal consultation with the USFWS, it appears that further consultation regarding impacts on San Joaquin kit fox and California red-legged frog will not be necessary.

Cultural Resources

The 249-unit alternative plan reduces the "footprint" of residential development by 13 acres. No archaeologic resources or historic resources were identified on the site. Nevertheless, Section 4.9: Cultural Resources concludes that there is an unknown (but potentially significant) risk of buried resources/artifacts that could be exposed during grading. The 249-unit alternative reduces the area to be graded by approximately 20 percent, so there is a proportionate decrease in the potential to disturb buried cultural resources.

Visual Resources

Although the style of development remains similar, the visual impacts from the project would be substantially diminished as a result of the changes shown in the 249-unit alternative. Lowering the crestal elevation of the three major north-northeast trending ridges remains in the proposed alternative, together with the padded lot style, but significant portions of this original development type have been eliminated, reducing the "footprint" of development by 13 acres. The intent of Mitigation Measure 4.10-3 is to provide open space adjacent to the road. In effect, it is an alternative approach to protecting the crestal elevations of the three prominent knolls on the site.

A 2-acre park parcel in the easterly quadrant of the intersection of Street N and Street B replaces proposed Lots 55–58, 72 and 73, and 312–315 in the 319-unit Project. This park space would improve the internal views from the surrounding lots and segments of Street N. Distant views from off-site, however, would not be affected by this change due to screening by intervening topography. The open space on the north-northeast facing slope in the northern section of the site would be enlarged (with the removal of Lots 97–125 and 192–206 of the 319-unit Project). This represents a substantial increase in private Open Space in the northern portion of the site. The 319-unit Project proposed a high cut slope on the major hill facing southbound Bailey Road traffic. This earthwork has been eliminated. The natural swale would remain where the double-loaded road was proposed.

The water tank service road originally located between Lots 104 and 105 of the 319-unit Project has been revised to start near Lot 147 of the 249-unit alternative and to traverse the open space/hill face to the water tank at elevation +870 feet. (As Figure 6.3-6 indicates, the service road intersects

Street A, approximately 150 feet west of Bailey Road.) Two switchbacks have been proposed, graded into both flanks of the relatively steep, east-west trending ridge, to reach the tank. Cut and fill slopes above and below the 14-foot-wide service road would be highly visible in short-range views from Bailey Road. The grading plan indicates that the height of graded slopes would be kept to a minimum. Nevertheless, this grading will create a scar and have an adverse visual effect on the natural appearance of the existing hill face.

A detailed improvement plan for the water tank service road has not been prepared at this time. Careful planning of grading, including aggressive erosion control measures to re-establish vegetation on engineered slopes, will be important to restoring a natural, open space appearance to this hill face.

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[1] Unless otherwise noted, descriptions of proposed project drainage improvements are taken from the project's Vesting Tentative Map, Op. Cit., CSW Stuber/Stroeh Engineering Group, Inc.

[2] Sheila Larsen, U.S. Fish and Wildlife Service, e-mail to Sue Orloff, Ibis Environmental Services regarding the site's suitability as San Joaquin kit fox habitat, dated January 10, 2000.

[3] U.S. Fish and Wildlife Service, *Informal Section 7 Consultation for the Proposed Bailey Estates Residential Subdivision Development, Contra Costa County, California*, File Number 1-1-02-I-2476, letter to Mr. Calvin C. Fong, Chief, Regulatory Branch, U.S. Army Corps of Engineers from Jan C. Knight, dated July 5, 2002.

6.4 APPLICANT'S REDUCED DENSITY PLAN – 270 UNITS

The applicant has submitted a reduced density plan that responds to concerns raised by the EIR consultant team primarily associated with visual impacts and biological resources. The mitigated plan is shown in Figure 6.4-1 and a photosimulation of this alternative is shown in Figure 6.4-2. This plan eliminates the lots along the northern drainage and immediately adjacent to Bailey Road in the northeast corner of the project site. The total number of lots would be 270, a decrease of 49 from the 319-unit Project. The open space area would increase by 14 acres to a total of 71 acres compared to 57 acres in the original 319-unit Project. It is assumed that the water tank and service road would be sited in the same location as that shown for the 319-unit Project.

The applicant's 270-unit reduced density plan would meet the objectives as stated above.

Planning Policy

Although this alterative has partially reduced development on slopes of 30 percent and retains the northern drainage and wetland area, it is still only partially consistent with several of the General Plan policies cited in Table 3-1. Views of the project will continue to be seen from Bailey Road. The central and southern ridges and slopes still would be developed at the same intensity as the proposed project. The density of this alternative would be consistent with the General Plan Land Use designation.

Fewer residences would be subject to the traffic noise from Bailey Road. This alternative eliminates lots which would be exposed to a CNEL greater than 65 dBA and which would require a noise barrier. Units would be placed in fairly close proximity to the detention basin/wetland area. This could become a potential safety hazard for neighborhood children. The basin should be fenced to prevent children from entering.

Geology/Soils/Seismicity

In this alternative, the graded area has been removed from the northern ravine, and development has been removed from the northeast portion of the site. Major graded slopes are limited to the northernmost entrance road to the project and the engineered slopes immediately west of the parcel. Smaller cut and fill slopes are located east of Lots 2–4 and of Lots 243–245 of the 270-unit alternative. The slopes shown possess gradients of 2:1 (horizontal to vertical). Other comments on the grading are as follows:

- **Detention Basin.** Just west of Bailey Road, in the northeast portion of the parcel, a storm water detention basin is shown. The slopes on the perimeter of the basin are 3:1 (horizontal to vertical) and the embankment on the downstream (north) flank of the basin is 15+ feet high. Downstream from the detention basin, an ungraded fresh water marsh area is indicated.

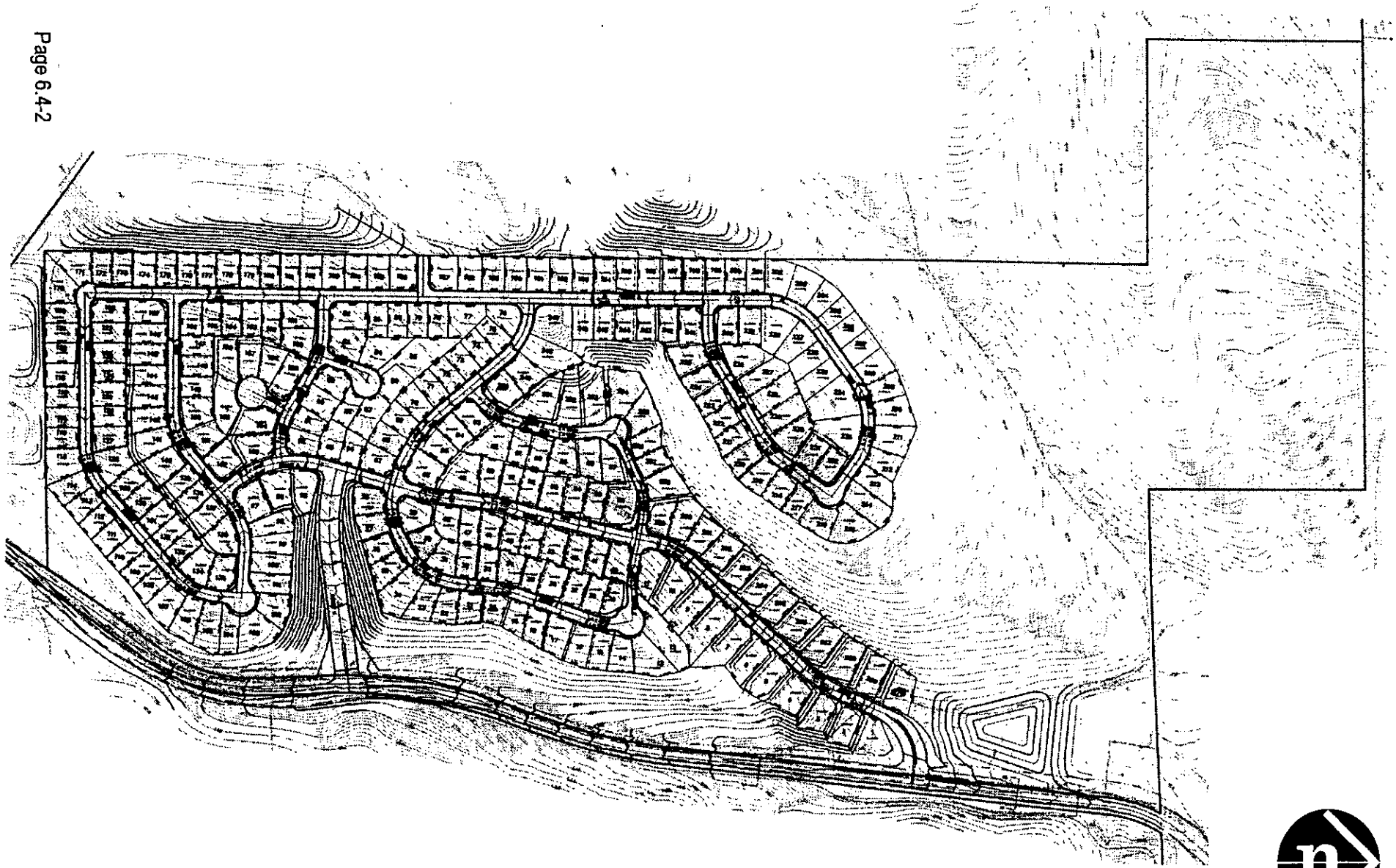
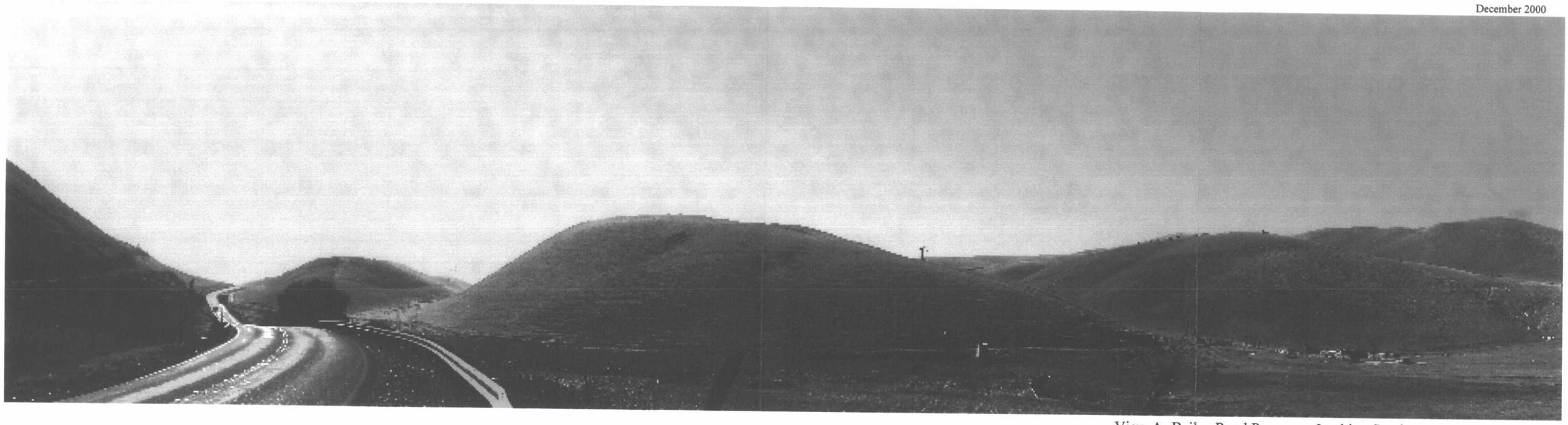
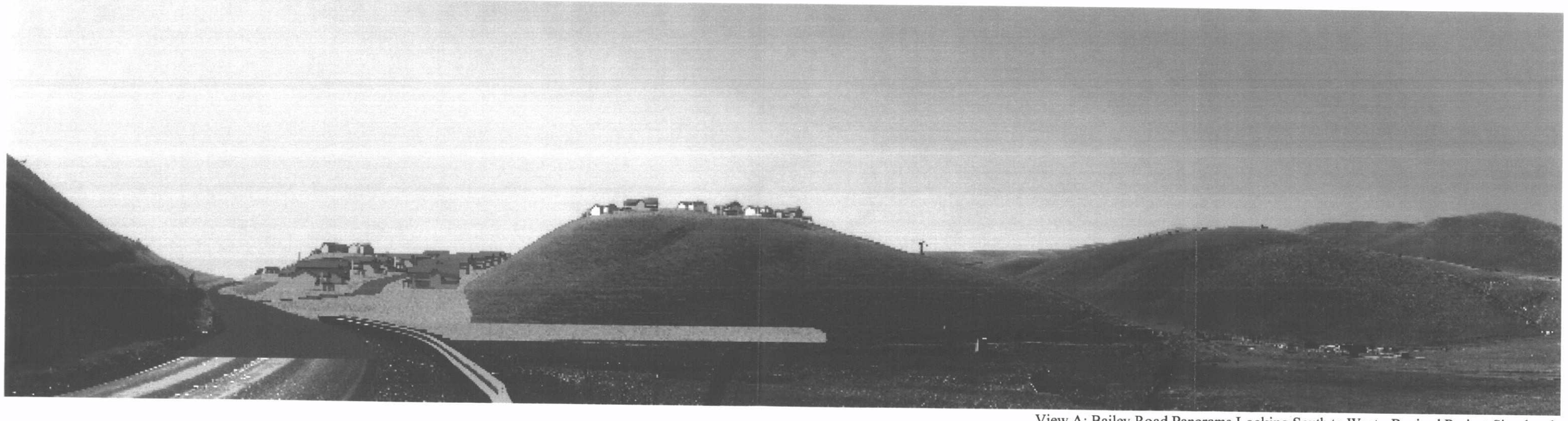


Figure 6.4-1 Applicant's Reduced Density Plan



View A: Bailey Road Panorama Looking South to West - Existing View



View A: Bailey Road Panorama Looking South to West - Revised Project Simulated

Source: enVision design • Dan Parker/Architect

Figure 6.4-2 Photosimulation of Site as Viewed from Bailey Road

- **Slopes.** The project has eliminated grading and development from approximately 12 acres possessing slopes of 30 percent and greater. In this alternative, roads and residential lots cover 62 acres of the 122-acre site (51 percent of the property).
- **Landslides.** According to the mapping of Hallenbeck & Associates and Engeo Inc., there are no landslides within the areas proposed for residential development in this alternative.
- **Infrastructure.** Not addressed by this alternative are the location and grading for the water tank site, water mains, pump station and maintenance access road.

In summary, the modification to the 319-unit Project represented by this 270-unit alternative reduces the volume of earthwork by 25 percent (from 2 million cubic yards to 1.5 million cubic yards), avoids development of the steepest portion of the site, avoids the need for corrective grading of landslide areas, and produces an increase in open space. It also provides space for a storm water detention basin, and provides integrated open space having improved habitat value. The issue not addressed by this alternative are General Plan Safety Element Policy 10-P-3. This policy promotes 3:1 (horizontal to vertical) slope gradients on engineered slopes, while allowing steeper gradients when they can be supported by geologic/geotechnical data. In the case of the applicant's Reduced Density Alternative, all major slopes in the project could be flattened to 3:1 without affecting the development concept.

For consistency with this Safety Element policy, it is recommended that only side yard slopes or rear yard slopes between adjacent lots be allowed to have 2:1 slopes up to 6 feet high (maximum). Major cut slopes and fill slopes constructed in the transition area between residential lots and open space have a gradient of 3:1. Such slopes should be contour-rounded and tracked-walked with salvaged topsoil. The only exceptions to these general criteria relate to the proposed grading for the two entrance roads to the project.

- **Northern Entrance Road.** At the northern entrance road/Bailey Road intersection, 2:1 slopes are proposed at the rear of lots on the east side of the subdivision street. Additionally, there is a drainage ditch/grassy swale along the west side of Bailey Road, and a wetland/detention basin site on the adjacent northeast corner of the property.

  Grading is required for the roadway, drainage ditch and detention basin embankment. The elimination of four lots on the east side of the entrance road (nearest the Bailey Road intersection) would avoid 2:1 slopes over 6 feet high adjacent to Bailey Road. Another advantage of this alternative is that it increases the separation of residential lots from noise associated with traffic on Bailey Road, and provides an open space corridor immediately adjacent to the Bailey Road right-of-way. The elimination of these four lots would also provide space for a more formal entrance to the project (decorative wall, landscape screen) and would be consistent with the objectives of the project.

- **Southern Entrance Road.** Overlooking this entrance road (on both sides) is a 500-foot (long), 45-foot (high) graded slope possessing a 2:1 gradient. This slope could be flattened to a 2.5:1 gradient by a combination of measures, including construction of retaining walls and modification of the road design. This refinement of the design would increase the outlook for long-term stability of the slope, facilitate revegetation, bring the slope into substantial compliance with Policy 10-P-3, and at the same time would be consistent with the objectives of the project.

Drainage/Water Quality

The applicant's 270-unit reduced density plan indicates there would be 49 fewer lots on the project site, and that a larger area at the north end of the project site would remain undeveloped. It is estimated these changes would reduce the total developed area (residential lots and street rights of way) from approximately 74 acres to 62 acres. The plan also shows that a single detention basin would be constructed near the northeast corner of the property, just upstream (south) of the existing wetland area adjacent to Bailey Road. The basin would have a bottom area of approximately 6,000 square feet, a top area (at the elevation of the top of confinement berm) of one acre and a total depth of about 15 feet. This equals a maximum storage volume of almost 8.5 acre feet, and, according to the project engineer, a storage volume of 6.2 acre feet with two feet of freeboard.[1] It is not known if this would be adequate to detain the runoff from both a 10-year and a 100-year recurrence interval storm in accordance with Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) design criteria, but it appears the basin's drainage area would be only about 212 acres, rather than the 396 acres presented in the project's preliminary hydrologic modeling. This includes 78 acres on the project site, 52 off-site acres on the west side of Bailey Road, and 82 acres from the east of Bailey Road. As noted above, approximately 22.5 acres in the northwest corner of the site's main development area would now be left undeveloped. This area, together with an off-site area of nearly 66 acres to the west, would drain to the Lawlor Creek channel just downstream of the proposed detention basin. In addition, runoff from the existing 6-foot-diameter culvert under Bailey Road near the northeast corner of the site would also bypass the basin.[2]

These changes would reduce the area of new impervious surfaces within this upstream watershed, as compared with the 319-unit Project, but it cannot be determined what effect they would have on total runoff or detention storage. Because the contributing drainage area has been cut almost in half, the developed area would represent a much larger proportion of the watershed, so the relative increase in runoff should be substantially greater. However, total flow into the basin would also be less (since the drainage area is smaller), so this increase may not be significant. A new round of hydrologic modeling will have to be performed by CCCFCWCD to confirm the adequacy of the detention basin design and to determine peak flow rates at the downstream, Bailey Road crossing.[3] Because a detention basin would still be needed to control peak flows, all of the recommendations set forth in Mitigation Measures 4.3-1A through 4.3-1F would still apply to the 270-unit reduced density alternative.

Changes in the proposed site plan would also reduce the total volume of runoff below that anticipated under the 319-unit Project. Runoff volumes would still be higher than under existing conditions, though, so the recommended modifications to the standard detention basin design set forth in Mitigation Measure 4.3-2A, as required to control flow rates and protect downstream channels and drainage facilities, should also be applied to the reduced density plan.

The project area would be cleared and undergo extensive mass grading, which would increase existing levels of on-site soil erosion, and newly constructed residential neighborhoods would generate non-point source urban pollutants throughout the life of the improvements. These water quality impacts would be slightly less than expected under the 319-unit Project, but they would still represent a potential worsening of existing conditions. As a result, there would be no change in any of the recommended water quality mitigations.

Transportation/Circulation

Trip generation with this plan would be 15 percent lower than with the 319-unit Project. Daily two-way generation would be 2,584 trips, AM peak hour generation would be 52 inbound and 151 outbound trips and PM peak hour generation would be 176 inbound and 97 outbound trips (see Table 6.4-1). Project traffic would still be expected to produce significant impacts off-site at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections (for near term horizon or 2010 conditions). All on-site impacts with the proposed plan seem to have been addressed with the exception that no provisions have been made for bus stops on internal streets. By 2010, left-turn movements from both project access roadway connections to Bailey Road would potentially still be at unacceptable levels during both AM and PM peak traffic hours, but volumes would not meet urban peak hour signal warrant criteria levels at either location. Mitigation measures contained in Section 4.4: Transportation/Circulation pertaining to off-site impacts would also apply to this alternative.

Table 6.4-1

Project Trip Generation
Applicant's Reduced Density Alternative – 270 Units

				AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
		DAILY 2-WAY TRIPS		INBOUND		OUTBOUND		INBOUND		OUTBOUND	
PROJECT	SIZE	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL
Single Family Residential	270 Units	9.57	2,584	.19	52	.56	151	.65	176	.36	97

Trip Rate Source: Trip Generation 6th Edition by the Institute of Transportation Engineers, 1997.
Compiled by: Abrams Associates, June 2003.

Noise

Lots are eliminated along the northern portion of the property and immediately adjacent to Bailey Road. By so doing, lots would no longer be exposed to a CNEL greater than 65 dBA, nor would a noise barrier be required. A barrier would not be necessary for the remaining lots. This alternative would eliminate Impact and Mitigation Measure 4.5-1 for the proposed project. Forced air mechanical ventilation or air conditioning would still need to be provided for lots exposed to a CNEL of 60 or greater which includes Lots 1–7, 12–24, and 102–114 of the 270-unit alternative. A 9-foot-tall solid wood fence or equivalent would reduce outdoor noise levels to 60 dB.

Air Quality

This alternative would have construction-related air quality impacts similar to those of the 319-unit Project but the frequency and duration of these impacts would be less due to the reduced amount of construction that would occur. Impacts on local carbon monoxide concentrations would be lesser overall due to lower total trip generation. Regional air quality impacts would be about 15 percent lower than that of the 319-unit Project, and would not exceed the BAAQMD thresholds of significance. Impacts and mitigation measures applied to the 319-unit Project would also apply to this alternative.

Public Services/Utilities

Impacts on public services and utilities would be similar as with the 319-unit Project except the demand for services would be reduced approximately 15 percent which is not a substantial reduction. As with the 319-unit Project, this alternative also does not include a local park facility for neighborhood children. The number of students generated by the development would impact the local school capacity. The demand for police and fire would be similar as with the 319-unit Project. A larger area of open space is provided under this alternative which could be subject to wildland fires. Impacts and mitigation measures identified for the 319-unit Project would apply to this alternative as well.

Biological Resources

This alternative would serve to partially avoid some of the jurisdictional wetlands in the northeastern portion of the site, and would eliminate proposed residential development and the access road out of the northern drainage, which would be of benefit to biological and wetland resources. Details on proposed improvements in or near the wetland complex and through the northern drainage have not been clearly defined, but could include one or more detention basins, access to the water tank if sited in the northwestern corner of the property, and construction of a new breeding pond for California tiger salamander and California red-legged frog. As indicated in Figure 6.4-1, at least one detention basin would be located at the edge of the jurisdictional wetlands, just north of the proposed access off Bailey Road. Detention basin capacity requirements and need to collect runoff from proposed development may limit options for siting the proposed detention basin under this alternative, although the applicant's wetland consultant indicated that the intent is to minimize impacts to jurisdictional wetlands.[4] However, the location of the proposed

northern access roadway and the fact that residential lots extend all the way to Bailey Road will most likely limit options for the design and layout of the detention basin. Because of the limitations, a culvert would also be required along an approximately 275-foot segment of the proposed drainage swale bordering Bailey Road near the northern access. Mitigation Measures 4.8-2A through 4.8-2D would still apply, but to a lesser degree under this alternative.

The northern drainage would be retained as open space which would be an improvement over the project as originally proposed. However, aspects of development could still affect the functioning of the northern drainage as a movement corridor for wildlife. This includes the access road to the water tank if it is to be sited in the northwestern corner of the property, the water line to the tank, and possibly a detention basin under evaluation. These modifications would interfere with unimpeded use by wildlife, particularly if a large detention basin is constructed in the steeply-sided drainage. Several components of Mitigation Measure 4.8-4 would still apply to this alternative, although this impact would remain significant and unavoidable.

This alternative would still have a significant impact on general wildlife movement through the southern hills of Pittsburg. Development would extend to the southwestern corner of the site, leaving only a 60-foot-wide opening between proposed residences and the chain-link fencing at the north edge of the Concord Naval Weapons Station. Land-motile wildlife species would not pass through the development itself because of the density of the development.

Measures recommended to mitigate potential impacts of the project would still be required under this alternative. These include measures to address impacts on wetland, wildlife connectivity, and special-status species. Habitat avoidance, permit authorization from trustee agencies, and preconstruction surveys would still be required as called for in Mitigation Measures 4.8-1A through 4.8-1D to address potential impacts on special-status species. Permits would still be required from the Corps, USFWS, and CDFG, and may include additional mitigation beyond that specified in Section 4.8: Biological Resources of this EIR.

Cultural Resources

This alternative would not alter the findings as described for the 319-unit Project.

Visual Resources

Visual impacts would be partially reduced with implementation of this alternative. As shown in Figure 6.4-2, the houses proposed along the northerly drainage have been eliminated; however, views of the lots that front along Bailey Road would still be visible to motorists when traveling in either direction on Bailey Road. Houses located on top of the most northern ridge also would continue to be visible. The plan has not pulled back the lots in the southeast corner that are located in close proximity to the roadway. The visual impact of these houses would be the same as with the 319-unit Project and as shown in Figure 4.10-3. Mitigation Measures 4.10-2, 4.10-4 and a portion of 4.10-3 would also apply to this alternative.

[1] Wayne Leach, CSW/Stuber-Stroeh, Inc., personal communication, June 8, 2001.

[2] Drainage area measurements prepared for this EIR by Andrew Leahy, P.E.

[3] Although this point of concentration is approximately 1,000 feet downstream of the site, project impacts should be calculated for this location because runoff from more than 40 acres of the development site would bypass the detention basin with no attenuation.

[4] Ted Winfield, personal communication with James Martin of Environmental Collaborative on June 13, 2001.

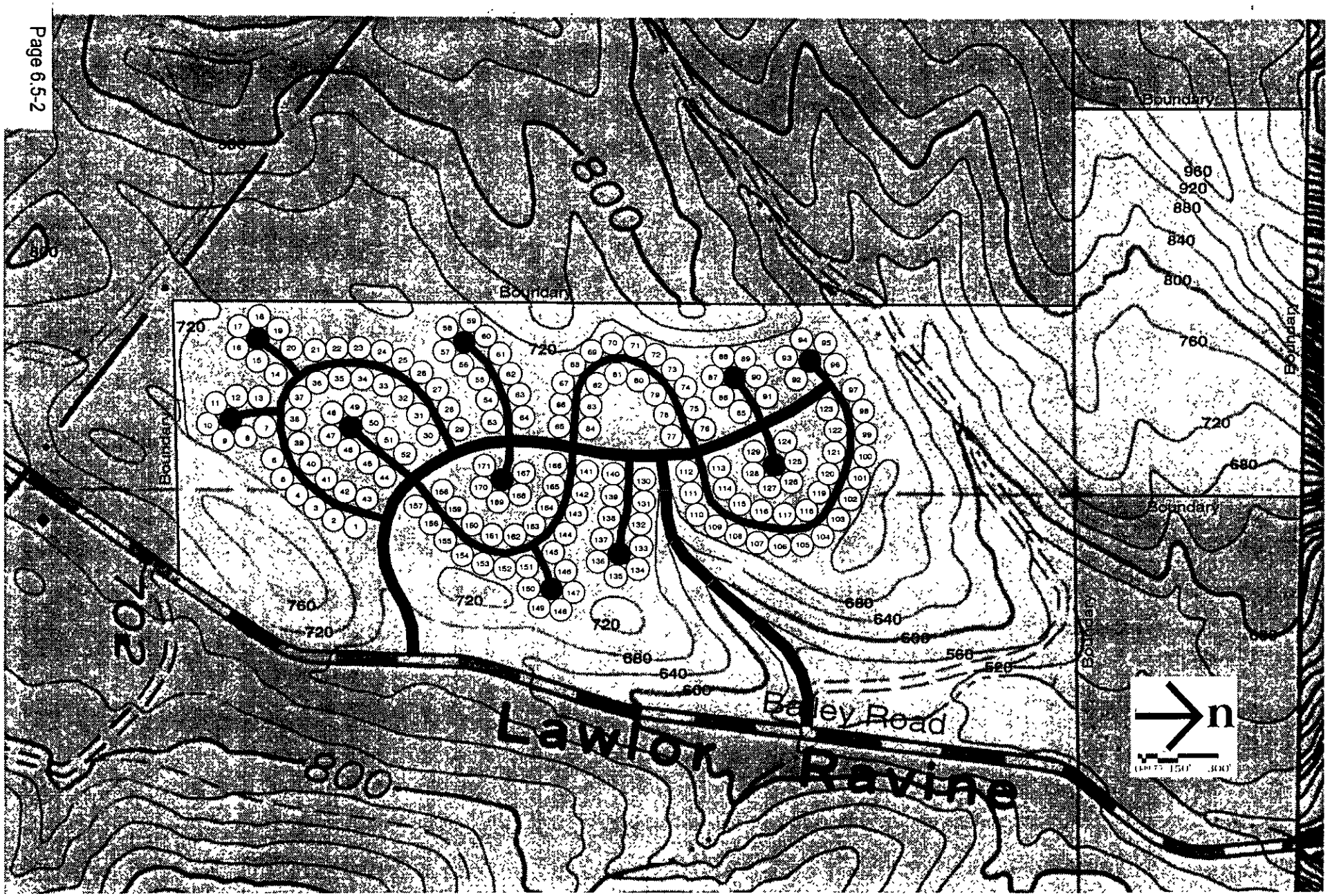
6.5 MITIGATED SITE PLAN ALTERNATIVE – 171 UNITS

The Mitigated Site Plan Alternative was produced chiefly to respond to visual quality impacts associated with the proposed project. As illustrated in Figure 6.5-1, the number of lots shown on this plan totals 171, a decrease of 158 from the 319-unit Project. As this is a conceptual plan, the number of lots is not exact and most likely a few more could be accommodated without altering the development concept. The white circles have a footprint of approximately 4,500 square feet, so this project is not designed for estate-sized lots, but is designed to create single-family neighborhood clusters with areas of open space interspersed throughout. This plan was created to eliminate visual and noise impacts associated with the proposed project, but it is inferred to reduce the extent of grading and to reduce biological impacts. The intent of this plan is to depress the elevation of buildings pads. In this way, lots would be contained behind the hills, providing an open space buffer between Bailey Road and the subdivision. Cut and fill would be required, but the visual impacts of the steep fills and high cuts associated with the project plan would be reduced. This plan also assumes that the water tank and service road would be located in the same area as that shown on the tentative map in Figure 2-3.

The plan incorporates the following concepts:

- Contour grading retains the natural appearance of the existing hills along the Bailey Road frontage;
- Grading is limited to areas within project boundaries;
- No houses are located in close proximity to Bailey Road, no houses are sited on ridge lines and houses near hill edge are hidden by siting behind preserved hilltop berms;
- All roads are looped or are short cul-de-sacs for improved access and safety;
- No houses front on the higher capacity arterial loop road;
- More houses are located with direct access to surrounding hills and open space; and
- Area near Lots 77–84 could be a central landscape feature/neighborhood park.
- The reduced number of units provides a community that can be more water- and energy-efficient than the 319-unit Project.

This alternative does not meet all of the applicant's objectives: the lots would be less than 6,000 square feet and the alternative could not provide the executive-style subdivision with large two-story homes and large yards. However, it does meet the applicant's objectives in providing substantial open space to enhance wildlife habitat and corridors and to enhance major drainages and wetlands.



Source: enVision design • Dan Parker/Architect

Figure 6.5-1 Schematic Alternative Plan

Planning Policy and Land Use Compatibility

This alternative would be consistent with the City's General Plan land use designation and in keeping with policies related to retaining visual resources along Bailey Road, clustering of development, reducing massive cut and fills, and retaining natural resources such as creekways and wetlands. Moving the lots behind the hillside eliminates the noise impacts associated with traffic on Bailey Road.

Geology/Soils/Seismicity

The area proposed for development is limited to approximately 50 acres of the 122-acre site, and the residential lots are set back a minimum of 180 feet from Bailey Road. The slope gradients indicated are 2:1 (or flatter).

With respect to grading, the concept is to sheet grade the 50± acres to create a padded area at an elevation of 680 to 720 feet ±. The volume of earthwork is unknown and it is not clear that the grading will balance. However, in this approach to earthwork it can be expected that the elevation of the sheet graded area would be adjusted up (or down) to achieve a balance. The grading would be limited to the site (i.e., no earthwork needed west of the parcel on the Federal blast zone easement).

This alternative avoids developing the slopes facing Bailey Road but does permit development on the westerly/northwesterly facing slopes. However, by creating a nearly level area for development, there are no geologic or slope stability problems.

Drainage/Water Quality

The Mitigated Site Plan Alternative would further reduce the developed area to an estimated 43 acres, or only 11 percent of the 395-acre watershed. This would cause infiltration rates to increase by only 4.5 percent over existing conditions, so it is expected that the associated increase in peak rates of storm water runoff would be quite small. This would not eliminate the need for on-site detention, since any runoff increase within the upstream reaches of the watershed could adversely affect existing, downstream flooding conditions. It should, however, significantly reduce the amount of storage needed to control both peak flow rates and the total runoff volume below the level required for the 319-unit Project.

A detention basin site has not been identified on the mitigated site plan, so it is not possible to determine how much of the total watershed would bypass the basin and flow directly to downstream reaches of Lawlor Creek. The north entrance road has been moved farther to the south, though, so there would be more room in which to construct a basin and maximize the storage volume without adversely affecting the existing wetland in the northeast corner of the property.

As with the 319-unit Project and the applicant's 270-unit reduced density plan, the Mitigated Site Plan Alternative would potentially increase on-site erosion during construction and would generate non-point source urban pollutants once the new homes are occupied. The mitigation measures set forth for the 319-unit Project would need to be implemented during construction and throughout the life of the Mitigated Site Plan project to protect downstream water quality.

Transportation/Circulation

Trip generation with this plan would be 47 percent lower than with the 319-unit Project. Daily two-way generation would be 1,636 trips, AM peak hour generation would be 33 inbound and 96 outbound trips, and PM peak hour generation would be 111 inbound and 62 outbound trips (see Table 6.5-1). Project traffic would still be expected to produce significant impacts off-site at the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections (for near term horizon or 2010 conditions). The detail of the schematic plan for this alternative does not allow evaluation of on-site circulation impacts with one exception. One proposed internal intersection (adjacent to Lots 157 and 158 of the Mitigated Site Plan) would be located on the inside of a curve, which could restrict sight lines for drivers. By 2010, left-turn movements from both project access roadway connections to Bailey Road could potentially be operating at acceptable levels during both the AM and PM peak traffic hours and volumes would be well under peak hour signal warrant criteria levels at both locations.

Table 6.5-1

Project Trip Generation
Mitigated Site Plan Alternative –171 Units

		DAILY 2-WAY TRIPS		AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
				INBOUND		OUTBOUND		INBOUND		OUTBOUND	
PROJECT	SIZE	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL
Single Family Residential	171 Units	9.57	1,636	.19	33	.56	96	.65	111	.36	62

Trip Rate Source: Trip Generation 6th Edition by the Institute of Transportation Engineers, 1997.
Compiled by: Abrams Associates, June 2003.

Noise

This version eliminates all lots adjacent to Bailey Road for a total of 171 units. This alternative would place most units nearest to Bailey Road behind the top of a graded ridge. This scenario would successfully eliminate potential noise impacts.

Air Quality

This alternative would have construction-related air quality impacts similar to those of the 319-unit Project but the frequency and duration of these impacts would be less due to the lesser amount of construction that would occur. Impacts on local carbon monoxide concentrations would be lesser overall due to lower total trip generation. Regional air quality impacts would be about 46 percent lower than that of the 319-unit Project, and would not exceed the BAAQMD thresholds of significance.

Public Services/Utilities

The reduction in lots would result in an approximate 50 percent reduction in the demand for public services and utilities. The number of children attending local schools would be significantly reduced as compared to the 319-unit Project. This plan creates neighborhood parks which are necessary for a development that, due to topographic constraints, is not located in close proximity to City parks or not easily accessible for children wishing to ride their bicycles.

Biological Resources

This alternative would serve to mitigate direct impacts on sensitive biological and wetland resources, and would provide opportunities to address other issues of concern. The northern access off Bailey Road would be located outside of jurisdictional wetlands. The fact that residential lots are not proposed along the access road would provide for greater flexibility in siting the required detention basin, which could possibly be accomplished without affecting the existing wetlands. The long culvert required under the applicant's 270-unit reduced density alternative could presumably be left as an open swale along most of the Bailey Road frontage under this alternative. The northern drainage would remain as open space as part of mitigation for impacts on California tiger salamander and to serve as a movement corridor for wildlife. Additional improvements within the northern drainage, such as the water supply line and access road to the water tank would presumably be implemented consistent with recommended mitigation measures to minimize disturbance to wildlife. Development has also been restricted away from the southwestern corner of the site under this alternative, which would allow for improved movement by land-motile wildlife species.

Measures recommended to mitigate potential impacts of the project would still be required under this alternative. These include measures to address impacts on wetland, wildlife connectivity, and special-status species. Permits would still be required from the Corps, USFWS, and CDFG, and may include additional mitigation beyond that specified in the Biological Resources section of this EIR. This would include the proposed breeding pond for California tiger salamander and California red-legged frog, which would be constructed near the wetland complex. Because of the additional flexibility available in addressing impacts on wetlands and wildlife habitat, this alternative would be superior to the 319-unit Project or the applicant's 270-unit reduced density alternative.

Cultural Resources

This alternative would not alter the findings as described for the 319-unit Project.

Visual Resources

This plan provides for clustered development along opposite sides of a network of loop roads with private open space corridors at the rear of each lot. The lot size would be smaller, averaging approximately 4,800 square feet. Because the developed area is relatively flat and because it is surrounded by hills/ridges, the lots would largely be invisible from the road. Conversely, residents would not have long-range views as provided for in either the 319-unit Project or the applicant's 270-unit reduced density alternative. Views from Bailey Road would be of grassy slopes, similar to present conditions.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an *environmentally superior alternative* be identified. The "No Project" alternative is environmentally superior to all other alternatives in that it retains the site in an open space land use. Thus, the environmental effects of a residential project are avoided (e.g., no grading, no change in runoff characteristics of the site, no traffic, no urban demand for public services and utilities, and the site remains as visual open space for motorists traveling on Bailey Road. However, the property is designated by the Pittsburg General Plan as Low Density Residential (1–3 units/gross acre), along with Open Space and Park site (see Figure 3-2). Therefore, the long-range land use for the site is Residential and adoption of the "No Project" alternative would be only an interim grazing/open space use of the property. Moreover, the No Project Alternative would not be consistent with the project objectives, which are presented in Chapter 2: Project Description.

The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice; it need not consider every conceivable alternative to a project. Rather, the alternatives must be limited to ones that would meet the project's objectives and are ostensibly feasible, and would avoid or substantially lessen at least one of the significant environmental effects of the project. The alternatives presented all fall under the broad classification of "reduced density" alternatives. They are single-family residential alternatives because the site is designed for Low Density Residential (1–3 units/gross acre) by the Pittsburg General Plan. The project alternatives discussed in this chapter are designated:

- Reduced Density Alternative – 249 Units
- Applicant's Reduced Density Alternative – 270 Units
- Mitigated Site Plan Alternative – 171 Units

The characteristics of these alternatives have previously been described in Sections 6.3, 6.4 and 6.5, respectively. Each of these alternatives responds to several of the identified environmental impacts. For example, all three reduce lot yield, so traffic effects of the project, along with demand for public services and utilities, is reduced. The Mitigated Site Plan Alternative is focused on minimizing the visual and noise effects of the project, but in the absence of a grading plan it is difficult to accurately analyze its effectiveness. However, as Figure 6.5-1 indicates, the units achieve a setback of 225 feet from Bailey Road. The plan is diagrammatic in the sense that building sites are represented by white circles, suggesting perhaps zero lot line or cluster development. This alternative does not make provision for a future San Marco Boulevard connection, there is no park site indicated, and no indication of infrastructure is shown (i.e., no storm water detention basin, no water reservoir or pump station). It should also be recognized that many development costs are fixed and, due to the location of the site on the southern edge of the City, development costs for infrastructure are substantial. The 171-unit alternative may not be economically feasible. Furthermore, it is not the upscale, single-family residential project identified in the project objectives.

The applicant's 270-unit reduced density alternative protects the habitat value of the northern swale, and includes a storm water detention basin, but it fails to provide a park, or make provision for the possibility of the San Marco Boulevard extension to pass through the site, and residential lots attain a very minor setback from the Bailey Road right-of-way (75 feet). The 249-unit reduced density alternative is a variation on the applicant's 270-unit alternative. The alternative includes an arterial street that has a 100-foot-wide right-of-way that extends to the west property line, a developed 2-acre park, and a more highly evolved infrastructure plan for the detention basin, water reservoir, its access road and pump station. Additionally, it has 21 fewer residential lots than the 270-unit alternative, so it has proportionally less traffic and demand for public services and utilities. On this basis, the Reduced Density Alternative – 249 Units is identified as the *environmentally superior alternative*.

To provide sufficient information to allow meaningful evaluation, analysis and comparison of the 249-unit alternative with the 319-unit Project, Table 6.6-1 presents a summary of each significant impact, followed by an assessment of the success of the *environmentally superior alternative* to reduce or avoid significant impacts that were identified for the 319-unit Project.

Table 6.6-1
COMPARISON OF THE 319-UNIT PROJECT WITH THE REDUCED DENSITY ALTERNATIVE – 249 UNITS
SUMMARY OF SIGNIFICANT, AFFECTED IMPACTS

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
POLICY PLANNING				
3-1: The policy consistency issues raised by this impact were associated with a) placement of lots in the northern drainage area and b) construction of Original Project Lots 1–6 adjacent to Bailey Road, where they compromise the visual open space along the Bailey Road corridor.	Impact Reduced	All residential lots have been eliminated in the northern drainage area. Lots 1–6 are eliminated in the 249-unit alternative.	PS	PS
Or:	Impact Removed	If Lots 1–3 are eliminated, the residential lots would achieve a setback of approximately 200 feet from Bailey Road.	PS	LTS
GEOLOGY/SOILS/SEISMICITY				
4.2-2: The Original Project includes high 2:1 cut and fill slopes within the area of residential lots, along with high, angular engineered slopes in the on- and off-site open space.	Impact Reduced	The number of in-tract high slopes is reduced and their gradients are flattened (2.5:1) with the 249-unit alternative. Also see Visual Resources Mitigation Measures 4.10-3 and 4.10-4.	PS	PS
DRAINAGE/WATER QUALITY				
4.3-1: This impact addresses the increased flows from the project and the potential to worsen downstream flooding problems.	Impact Reduced	The design of the detention basin was based on consultations with CDFG and USFWS.	PS	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
4.3-2: This impact addresses the increase in volume of runoff, which has the potential to add to existing erosion and sedimentation problems.	Impact Reduced	The new alternative is smaller (20 percent) and the project is charged with reducing runoff from the site by 5 percent over the undeveloped condition.	PS	PS
4.3-3: This impact addresses the effect of grading during construction on water quality in Lawlor Creek.	Impact Reduced	The smaller project yields fewer water quality effects.	PS	PS
TRANSPORTATION/CIRCULATION				
4.4-1: Year 2005 Impact	Impact Reduced	The elimination of 70 lots reduces project traffic by Bailey Road by 22 percent.	PS	PS
4.4-2: Year 2010 Impacts	Impact Reduced	The elimination of 70 lots reduces project traffic by Bailey Road by 22 percent.	PS	PS
4.4-3: Year 2025 Impacts	Impact Reduced	The elimination of 70 lots reduces project traffic by Bailey Road by 22 percent.	PS	PS
4.4-4 through 4.4-7: Internal Circulation	Impact Reduced	The circulation system keeps options open for a future San Marco Boulevard connection. The design of subdivision streets in the project are subject to refinement during review of improvement plans to comply with all City requirements.	PS	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
NOISE				
4.5-1: Noise levels exceed both the 60 and 65dB land use guidelines for single-family residential development for Lots 1–6.	Impact Removed	Noise levels reduced with elimination of lots along the northern portion of the property immediately adjacent to Bailey Road; no sound barrier would be required for lots adjacent to Bailey Road. Because of the potential for Street N to serve as an arterial street, 6-foot-high sound barrier walls are required for lots adjacent to Street H, from Street N to the west boundary of the site. (A decorative 6-foot-high sound barrier wall can compliment the views of the project from the Street N road corridor.)	PS	LTS
4.5-2: Units exposed to an outdoor CNEL exceeding 60 dB are expected to exceed the interior noise goal of 45 CNEL unless properly insulated.	Impact Increased	***4.5.2A: Mechanical Ventilation.*** House designs shall incorporate forced-air mechanical ventilation (or air conditioning) to provide a habitable interior environment with the windows closed for lots affected by traffic noise from Bailey Road and Street N. These include the 249-unit alternative Lots 1–7, 12–24, 64–70, 147–149, 156–162, 166–168 and 205–211.	PS	PS
		4.5.2B: Deed Restriction. The following statement shall be recorded at the County Recorder's Office concurrent with recordation of the Final Map, for each parcel in Bailey Estates:	NC	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
		"This document shall serve as notification that Street N [use correct name] in Bailey Estates stubs out at the west boundary of the project. When this road is extended to the west, traffic volumes and road noise will substantially increase. Although the sound barrier walls have been included to control outdoor noise along the most impacted lots, along with mechanical ventilation and/or air conditioning to keep interior noise levels within appropriate standards for residential use, buyers/ owners should be fully aware of this potential increase in noise."		
4.5-4: The 249-unit alternative shows the pump station site to be approximately 40 feet from Lot 147 (see Figure 6.3-6). Mechanical equipment at the pump station poses the potential to create objectionable noise levels at the nearest residential lots.		***Pump Station Noise Controls*** ***4.5-4A.*** Pump station noise shall be controlled so as not to exceed a steady level of 45 dBA as measured at any location on any residential property. ***4.5-4B.*** The design for the pump station shall be reviewed by a qualified acoustical specialist to ensure that sound insulation treatments, such as acoustical caulking, acoustical louvers, sound attenuators or other treatments, are sufficient to meet the noise performance standards outlined in Item (a) above. A report shall be submitted along with the design for the pump station documenting this finding.	NC	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
AIR QUALITY				
4.6-1: Earthwork has the potential to generate exhaust emissions and fugitive particulate emissions that would affect local air quality.	Impact Reduced	The new alternative reduces the graded area by approximately 20 percent, implying a proportionate decrease in the duration of grading operations and size of the disturbed area.	PS	PS
4.6-4: Use of wood-burning fireplaces has the potential to affect regional air quality.	Impact Reduced	The mitigation measure recommended for the Original Project is 75 percent effective in reducing emissions from wood-burning fireplaces. The new alternative has 70 fewer units, so the total "volume" of emissions from this source would be further reduced by 22 percent.	PS	PS
PUBLIC SERVICES/UTILITIES				
4.7-5: School Capacity	Impact Reduced	The 22 percent reduction in population reduces the school impact.	PS	PS
4.7-6: Parks	Impact Reduced	The design includes a 2-acre park site and improvements. The anticipated population of the 249-unit alternative would correspond to a 3.6-acre park. City policy favors an improved park rather than dedication of raw land alone. In this case, the alternative shows a 2-acre park site which would be developed fully improved.)	PS	LTS
4.7-7 through **4.7-12**: Utilities	Impact Reduced	The 22 percent reduction in population reduces utility demands.	PS	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
BIOLOGICAL RESOURCES				
4.8-1: This impact addresses the need to obtain permits from state and federal wildlife agencies, and to implement a range of measures to protect habitat of special status species.	Impact Removed	The new alternative retains nearly all of the critical portion of the site in open space land, and calls for implementation of mitigation measures to protect special status species and their habitat.	PS	LTS
4.8-2: This impact addresses the affect of the project on wetlands and their habitat.	Impact Removed	The new alternative retains most of the wetlands and provides mitigation measures to improve its habitat value.	PS	LTS
4.8-3: The Original Project resulted in the loss of most wet meadow and freshwater marsh habitat, along with an estimated 85 acres of grassland.	Impact Reduced	The intrusion into the wet meadow and freshwater marsh is limited to that which is unavoidable due to the need for a storm water detention basin and service road to the water reservoir. The disturbance to grassland is approximately 70 acres. Mitigation measures are provided to enhance the quality of the wet meadow and freshwater marsh that is retained.	PS	PS
4.8-4: This impact is related to the obstruction of a wildlife corridor.	Impact Removed	The new alternative has no lots in the northern drainage swale and only infrequent human presence in this area (for maintenance of the domestic water facilities and storm water detention basin).	PS	LTS
4.8-5: This impact is related to compliance with General Plan policies conflicting with local policies protecting biological resources.	Impact Removed	The new alternative has no lots in the northern drainage swale and the design has been modified to protect sensitive habitat features and maintain opportunities for wildlife movement across the site. (Refer to Mitigation Measure 4.8-4.)	PS	LTS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact	Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
			Original Project	Reduced Density Alternative – 249 Units
CULTURAL RESOURCES				
4.9-1: There is an unknown (but potentially significant) potential that earthwork could disturb buried cultural resources.	Impact Reduced	The new alternative reduces the graded area by approximately 20 percent, implying a proportionate decrease in the risk of disturbing buried resources.	PS	PS
VISUAL QUALITY				
4.10-1: The proposed project is inconsistent with General Plan policies pertaining to grading and retaining natural creek channels.	Impact Removed	The 249-unit alternative retains the northern drainage as open space, and 13 acres of development has been eliminated to significantly reduce the expanse of flat pad areas.	PS	LTS
4.10-2: The placement of Lots 183–190 is inconsistent with City policies relating to hillside development.	Impact Removed	The area of Original Project Lots 183–190 is now designated as permanent open space.	PS	LTS
4.10-3: The proposed project would be visible from Bailey Road when traveling in either direction.	Impact Reduced	Although the design of the 249-unit alternative addresses portions of Mitigation Measure 4.10-3, this measure calls for increasing setbacks along the Bailey Road frontage on the site. The lots nearest Bailey Road in the southern portion of the site achieve the 200-foot setback.	PS	PS
Or:	Impact Removed	By eliminating Lots 1–3 in the 249-unit alternative, a setback of approximately 200 feet would be maintained for the entire Bailey Road frontage of the project.	PS	LTS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact		Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
				Original Project	Reduced Density Alternative – 249 Units
	Or:	Impact Removed	Eliminate Lot 1; provide a 100-foot setback from Bailey Road for residential lots in the area of Lots 1–3; reconfigure Lots 2–3 so that they attain the 100-foot setback; revise the grading plan to a combination of retaining wall and 2.5:1 fill slopes (to soften views at the entrance to the project); and plant drought-tolerant California native trees and shrubs on the 2.5:1 slope.	PS	LTS
4.10-4: Grading scars will be visible where major cuts and fills are proposed.		Impact Reduced	While the 249-unit alternative has reduced most of the impacts, the 2:1 slopes continue to be a visual impact in the area of Lots 1–4, slope east of Lots 19–21, Lot 194, and in the open space lands south and west of the site.	PS	PS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

Summary of Significant Impact		Effect on Impact	Change to Impact/Mitigation	Resulting Level of Significance	
				Original Project	Reduced Density Alternative – 249 Units
	Or:	Impact Removed	Mitigation measures to remove the impact include: • With regard to Lots 1–3, see discussion of Lots 1–3 for Mitigation Measure 4.10-3 above; • Eliminate Lot 194 and adjust the grading so that no fills are required on the southeast side of Street J (opposite Lots 204–211). • Flatten slopes in the graded off-site open space lands to the west and south of the site to 3:1, if feasible; and • Modify the grading shown on the Vesting Tentative Map in the area of Lots 19–21 to avoid creating an engineered slope in private open space. Measures could include reduce pad size/split level pad/adjust pad elevation/retaining wall.	PS	LTS
4.10-5: A water tank will be constructed on the east-facing ridge in the northwest corner of the project site.		Impact Removed	A buried, reinforced concrete tank, with no more than 3 feet of the tank exposed at the surface, in combination with aggressive erosion control measures to revegetate graded slopes created for reservoir construction (including its service road), eliminates the visual impact.	PS	LTS

LTS = Less Than Significant; PS = Potentially Significant; SU = Significant and Unavoidable; NC = Not Considered (insufficient information).

7
REPORT PREPARATION

7
REPORT PREPARATION

EIR Authors

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Lynne LeRoy, Document Processing and Editing

Abrams Associates (Traffic Consultants)

Charlie Abrams, P.E.

Donald Ballanti (Air Quality)

Donald Ballanti, Certified Consulting Meteorologist

Environmental Collaborative (Biological Resources)

Jim Martin, Biologist

enVision design (Visual Resources and Graphics)

Dan Parker, Architect

Illingworth & Rodkin (Noise Consultant)
Rich Rodkin, Acoustical Engineer

Andrew Leahy (Drainage/Water Quality)
Andrew J. Leahy, R.C.E.

Previous Environmental Research

Mills Associates, under contract with the City of Pittsburg, prepared the Original DEIR. The technical studies for that document have been incorporated into this Recirculated DEIR, in some instances with revisions to the EIR chapters. The consultants on that EIR team and their sections included:

Mills Associates (Project Description, Land Use, Visual Quality, and Public Services/Utilities)
Carolyn Mills, Principal
Crane Transportation Group (Traffic Consultant)
Mark Crane, Principal
William Self Associates (Cultural Resources)
William Self, Principal

Persons Contacted

Sergeant Calia, Pittsburg Police Department

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Sue Orloff, Ibis Environmental Services

Dennis Pisila, Contra Costa Water District

Paul Reinders, City of Pittsburg Engineering Department

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Jim Wilson, Contra Costa County Flood Control and Water Conservation District

Ted Winfield, Wetlands Specialist, Ted Winfield & Associates

Amanda Wong, Assistant Engineer, Delta Diablo Sanitation District

APPENDICES

A. INITIAL STUDY CHECKLIST

City of Pittsburg
Community Development Department
65 Civic Avenue
Pittsburg, CA 94565
(925) 252-4920

NOTICE OF PREPARATION

Date: 02-01-2001

To: Public Agencies, Private or Business Organizations and Interested Parties

From: Avanindra K. Gangapuram, Project Planner

Lead Agency:

Agency Name: City of Pittsburg

Street Address: 65 Civic Avenue

City/State/Zip: Pittsburg, CA 94565

Contact: Avanindra K. Gangapuram, Project Planner

Subject: Notice of Preparation of a Draft Environmental Impact Report

City of Pittsburg Community Development Department will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our department when considering your permit or other approval for the project.

The applicant is requesting a General Plan Amendment, Rezoning and Annexation that would redesignate the site from Agriculture and Open Space to Residential and Open Space. The County's General Plan designates the site for Agriculture and the City's Draft General Plan (in progress) designates the site for residential use. The underlying project is a 319 single-family unit development.

The project description, location and the potential environmental effects are contained in the attached materials. A copy of the Initial Study is attached. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. Please send your response to the contact person at the address shown above. We will need the name of a contact person in your agency.

Project Title: Bailey Estates Residential Development

Project Applicant: Bailey Estates LLC, John Stremel

Project Location: Located west of Bailey Road and south of the City's municipal boundary

Signature: _____ Date: February 1, 2001

Title: Project Planner Telephone: (925) 252-4920

Attachments: Initial Study Checklist
Location Map
Site Plan

CITY OF PITTSBURG

Initial Study

1. Project title: Bailey Road Estates
2. Lead agency name and address: City of Pittsburg Community Development Department
3. Contact person and phone number: Avanindra K. Gangapuram, Project Planner
4. Project location: West of Bailey Road and south of the City's municipal boundary
5. Project sponsor's name and address: Bailey Estates LLC, John Stremel, 2762 Hutchinson Court, Walnut Creek, CA 94598
6. General plan designation: Open Space 7. Zoning: Agriculture
8. Description of project: General Plan Amendment, Rezoning and Annexation for a 319 unit single-family residential development on 122 acres of a 265-acre site. The remaining portion of the site would remain in open space as a part of the explosive safety easement for the Concord Naval Weapons Station. The General Plan Amendment would designate the property Hillside Residential and Open Space and the Rezoning would designate the property RS (Residential Single Family) and OS (Open Space). The application requires annexation to the City of Pittsburg and the Delta Diablo Sanitary District.

9. Surrounding land uses and setting: The site is bounded on the south by the Concord Naval Weapons Station, on the east by Bailey Road and the Keller Landfill beyond, and on the north and west by small areas of open rangeland. Adjacent areas to the southeast, northwest and west are located within an explosive safety zone of the Concord Naval Weapons Station and cannot be developed. Beyond the open rangeland to the north and northwest are other existing or "approved" major residential developments.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.) Contra Costa County LAFCO, U.S. Army Corps of Engineers, U.S. Fish and Wildlife, California Department of Fish and Game,

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

■ Aesthetics	■ Agriculture Resources	■ Air Quality
■ Biological Resources	■ Cultural Resources	■ Geology / Soils
■ Hazards & Hazardous Materials	■ Hydrology / Water Quality	■ Land Use / Planning
❐ Mineral Resources	■ Noise	■ Population / Housing
■ Public Services	■ Recreation	■ Transportation / Traffic
■ Utilities / Service Systems	■ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

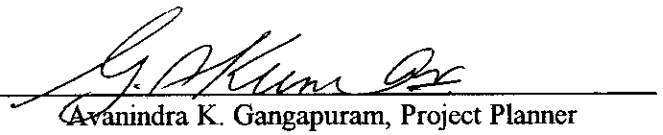
_ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

_ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

✔ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

_ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature Avanindra K. Gangapuram, Project Planner

February 1, 2001
Date

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I.	AESTHETICS — Would the project:				
	a) Have a substantial adverse effect on a scenic vista?	✔			
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✔	
	c) Substantially degrade the existing visual character or quality of the site and its surroundings?	✔			
	d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✔	

Discussion:

a & c) The residential development will be visible from Bailey Road and possibly from a designated hiking trail in the vicinity of the project site. The ridges and valleys will be graded and filled to accommodate the development.

b & d) The project is not anticipated to damage scenic resources as defined in the checklist. New light will be created by the development but is not anticipated to affect day or nighttime views in the area. The visual impacts of the project will be described in the EIR.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
II.	AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			✔	
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?		✔		

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?			✔	

Discussion:

a-c) The property is currently used as grazing land and is not land that is considered prime or unique farmland. The land is currently not under Williamson Act Contract. The property is currently zoned Agriculture and the Rezoning would change the designation from Agriculture to RS (Residential Single Family and OS (Open Space). Lands to the south are located outside the County's Urban Limit line and cannot be developed. Land to the west is within the Concord Naval Weapons Station and not subject to development.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III.	AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?				✔
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✔		
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	✔			
d)	Expose sensitive receptors to substantial pollutant concentrations?			✔	
e)	Create objectionable odors affecting a substantial number of people?				✔

Discussion:

a) The San Francisco Bay Area Air Basin is currently non-attainment for ozone (state and federal ambient standards) and PM_{10} (state ambient standard). While air quality plans exist for ozone, none exists (or is currently required) for PM_{10}. The *Draft San Francisco Bay Area Ozone Attainment Plan*

for the 1-Hour National Ozone Standard[1] is the current ozone air quality plan required under the federal Clean Air. The state-mandated regional air quality plan is the *Bay Area 2000 Clean Air Plan*.[2] These plans contain mobile source controls, stationary source controls and transportation control measures to be implemented in the region to attain the state and federal ozone standards within the Bay Area Air Basin. The project would not conflict with any of the growth assumptions made in the preparation of these plans nor obstruct implementation of any of the proposed control measures contained in these plans.

b) Construction activities would generate exhaust emissions from vehicles/equipment and fugitive particulate matter emissions that would affect local air quality. This impact is potentially significant, but normally mitigatible. BAAQMD CEQA Guidelines[3] provide thresholds of significance for air quality impacts. The BAAQMD significance thresholds for construction dust impacts is based on the appropriateness of construction dust controls. The BAAQMD guidelines provide feasible control measures for construction emission of PM_{10}. The DEIR will determine the appropriate construction controls to be implemented, such that air pollutant emissions for construction activities would be considered less-than-significant.

c) Development of the site would attract new regional vehicle trips which would create regional emissions. The Bay Area Air Quality Management District has established thresholds of significance for regional pollutants. A project is considered to have a significant regional air quality impact if it would result in an emissions increase of 80 pounds per day for ROG, NO_x (both ozone precursors) or PM_{10}.[4] The DEIR will utilize the URBEMIS-7G computer program to calculate emissions from all trips to or from the project and compare these emissions with the BAAQMD thresholds for precursors of ozone and PM10 (particulate matter, 10 micron).

d) The project would modify traffic volumes on the local street network, changing carbon monoxide levels along roadways used by project traffic and possible affecting sensitive receptors. Concentrations of this pollutant are related to the levels of traffic and congestion along streets and at intersections. A screening form of the CALINE-4 computer simulation model will be applied to intersections near the project site in the DEIR to determine effect of project traffic on sensitive receptors.

e) During construction the various diesel-powered vehicles and equipment in use on the site would create odors. These odors are not likely to be noticeable beyond the project boundaries.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES — Would the project:				

1 Bay Area Air Quality Management District, Draft San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard, March 29, 1999.

2 Bay Area Air Quality Management District, Bay Area 2000 Clean Air Plan , December 6, 2000.

3 Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

4 Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✔			
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	✔			
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	✔			
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	✔			
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	✔			
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✔

Discussion:

a) A number of special-status plant and animal species are known from the Pittsburg vicinity. Special-status species[5] are plants and animals that are legally protected under the state and/or federal Endangered

[5] Special status species include: designated rare, threatened, or endangered and candidate species for Department of Fish and Game (CDFG); designated threatened or endangered and candidate species fo Wildlife Service (USFWS); species considered rare or endangered under the conditions of Section 1538 *Environmental Quality Act Guidelines*, such as those plant species identified on lists 1A, 1B and 2 in *Inventory of Rare and Endangered Vascular Plants of California* by the California Native Plant Society (CNPS); and possibly other species which are considered sensitive or of special concern due of adequate information to permit listing or rejection for state or federal status, such as those inclu *Inventory* or identified as animal "Species of Special Concern" by the CDFG.

Species Acts[6] or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the Endangered Species Acts often represent major constraints to development, particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take"[7] of these species.

A detailed assessment of the potential for occurrence of special-status species must be conducted to confirm presence or absence on the site, and the potential impacts of the project on any species of concern. Species of concern considered to have a potential for occurrence on the site include: large-flowered fiddleneck (*Amsinckia grandiflora*), alkali milk-vetch (*Astragalus tener* var. *tener*), heartscale (*Atriplex cordulata*), San Joaquin spearscale (*Atriplex joaquiniana*), big tarplant (*Blepharizonia plumosa* ssp. *plumosa*), diamond-petaled poppy (*Eschscholzia rhombipetala*), stink bells (*Fritillaria agrestis*), fragrant fritillary (*Fritillaria liliacea*), Contra Costa goldfields (*Lasthenia conjugens*), caper-fruited tropidocarpum (*Tropidocarpum capparideum*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), California red-legged frog (*Rana aurora draytonii*), San Joaquin kit fox (*Vulpes macrotis mutica*), burrowing owl (*Athene cunicularia*), and several other species of raptors.

The site provides at least marginal habitat for most of these species, but the only assessment available for the site is an *Early Evaluation Report* for San Joaquin kit fox prepared for the applicant by Ibis Environmental Services (dated October 1999). The *Early Evaluation Report* concludes that occurrence of San Joaquin kit fox on the site is unlikely and the project is not expected to have a significant adverse impact on the recovery or viability of this species. At minimum, additional detailed surveys must be conducted to determine presence or absence of special-status plant species, California tiger salamander, and bird species of concern. A peer review of the conclusions in the *Early Evaluation Report*, need for further detailed surveys for kit fox and other species of concern, and a thorough evaluation of the potential impacts of development is necessary to accurately determine the significance of the project on special-status species.

b) The site appears to support a vegetative cover of primarily non-native grassland. According to the preliminary *Wetland Delineation* prepared for the applicant by Zentner and Zentner (dated December 1994), an approximately 2.83 acre portion in the northeastern corner of the site supports wet meadow habitat. This wet meadow area is dominated by primarily non-native species, but should still be considered a sensitive natural community. As currently proposed, most of this wetland habitat would be eliminated as part of the project. Additional surveys would be necessary to determine whether other sensitive natural communities types (such as native grassland) occur on the site and could be affected by development.

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[6] The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agenci to conserve endangered and threatened plant and animal species The California Endangered Species the policies of FESA and pertains to native California species.

[7] "Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, captur endangered species. "Harm" is further defined by the USFWS to include the killing or harming of wil obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant ha degradation. The CDFG also considers the loss of listed species habitat as take, although this policy case law support under the CESA.

c) The CDFG, U.S. Army Corps of Engineers (Corps) and California Regional Water Quality Control Board have jurisdiction over modifications to wetlands and other "waters of the United States." Jurisdiction of the Corps is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material without a permit. Regional Water Quality Control Board jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver to control discharges in water quality. Jurisdictional authority of the CDFG over wetland areas is established under Sections 1601-1606 of the State Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed or bank of any lake, river or stream.

As noted above, a preliminary *Wetland Delineation* was prepared for the applicant by Zentner and Zentner (dated December 1994). It is unclear whether the *Wetland Delineation* has been verified by the Corps, which is necessary to confirm the extent of jurisdictional habitat on the site. Based on the applicant's report, a minimum of 2.83 acres of wet meadow jurisdictional wetlands occur on the site. Most of this wetland would be eliminated by proposed development, which would be a significant impact of the project, and no plans have been prepared to provide for its protection or replacement. The extent of jurisdictional wetlands must be confirmed, potential impacts identified, and adequate mitigation measures identified as part of further environmental review.

d) The site provides suitable habitat for both common and sensitive wildlife species associated with grasslands in the south Pittsburg area. A thorough assessment of the importance of the site as wildlife habitat, and its relationship to other undeveloped lands in the vicinity must be conducted to adequately determine the potential impacts of the project.

e) Additional information on the presence or absence of sensitive biological resources is necessary before a thorough assessment of the relationship of the project to any applicable policies and ordinances of the City can be made. Until this information is available, this should be considered a potentially significant impact.

f) No adopted Habitat Conservation Plan, Natural Community Conservation Plan or other local, regional, or state habitat conservation plan encompasses the site or surrounding lands, and no adverse impacts are anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		✔		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✔		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✔		

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Disturb any human remains, including those interred outside of formal cemeteries?		✔		

Discussion:
a-d) This part of Contra Costa County has been occupied, at least intermittently, for the past 8,000 years or more based upon evidence gathered from archaeological sites in the region (Moratto 1984). The ethnographic inhabitants of the area were the Bay Miwok, who are known to have established villages in the vicinity(Levy 1978; Kroeber 1925). Currently, the parcel is used for cattle grazing as it has been over the past century or more.

A complete record search (#01-25; Northwest Information Center at Sonoma State University) has been conducted and field survey of the proposed 265-acre project location. No previous archaeological surveys had been conducted within the project location, however one survey was completed adjacent to the area (Scott 1989), with negative results. No historic or prehistoric sites or architectural resources are known to be located within the area. The survey of the 265-acre area was conducted on January 16-17, 2001 by WSA staff archaeologists Kim Popetz, M.A. and Monica Schmidt, B.A. No evidence of historic or prehistoric sites was observed during the intensive survey of the area.

Both historic and prehistoric archaeological sites are known to be located throughout the hills and valleys surrounding the project location in this portion of Contra Costa County. Although no such resources were noted as part of the record or literature search or observed during the intensive field survey of the area, there is always the possibility that site indicators are buried below the surface soil or obscured by vegetation. Indicators of prehistoric site activity include charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, and pockets of dark, friable soils. Historic resources include glass, metal, ceramics, wood and similar debris. Should any previously undiscovered historic or prehistoric resources be found during construction, work should stop, in accordance with CEQA section 15064.5, until such time that the resource can be evaluated and appropriate mitigative action taken as determined necessary by the City or County Lead Agency.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✔
• Strong seismic ground shaking?			✔	

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
	• Seismic-related ground failure, including liquefaction?	✔			
	• Landslides?	✔			
b)	Result in substantial soil erosion or the loss of topsoil?	✔			
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	✔			
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	✔			
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✔

Discussion:

a-e) The site is located near the crest of the Los Medanos hills, within the outcrop belt of the Markley formation - Lower Member (Tmkl) (USGS, Graymer, Jones and Brabb, 1994). The explanation accompanying the USGS map indicates that this unit consists of thin-bedded to massive sandstone with minor siltstone and mudstone. According to this map, a landslide deposit (Qls) occurs in a drainage swale in the north portion of the property. Additionally Undifferentiated Quaternary Alluvium (Qu) is mapped adjacent to the Bailey Road frontage of the site. No active faults are shown crossing the property. The northwest-trending Clayton fault passes approximately one mile to the southwest of the site. It is a northeast-dipping thrust fault that may be a seismic source, but which has no confirmed surface fault displacement during the Holocene Epoch. The active Concord fault is mapped five miles southwest of the site. It is considered to be capable of generating a earthquake possessing a magnitude of up to 6.5.

The USGS has issued Professional Paper 1357 (Ellen and Wentworth, 1995) that characterizes hillside materials in the San Francisco Bay Region. The maps and unit descriptions are intended to provide a guide to the physical nature of the ground from place-to-place in hillside terrain of the region. The report does not classify geologic units according to their slope stability characteristics. Instead, it provides a unit description, emphasizing physical properties that most influence engineering operations in land development. This publication describes the geologic unit that is mapped on the property as follows:

Sandstone, arkosic, characteristically rich in muscovite; silty to varying degrees . . . The sandstone is firm to soft, most barely firm . . . Sandstone weathered to depths of 70 feet. Most bedrock is unexpansive, but some is severely expansive.

With regard to geologic hazards, a large landslide area is mapped by the USGS in the north portion of the site (Nilsen, 1975). According to Hallenbeck & Associates, geotechnical consultants to the project proponent, this slide is inferred to be a dormant, deep-seated bedrock slide. It is outside of the areas being considered for development, but appears to be immediately downslope from the proposed water reservoir site and may indicate that the weathered bedrock elsewhere on the site is near its stability limits and may be sensitive to grading. The Hallenbeck report also indicates soils on the site are expansive.

According to the Soil Survey of Contra Costa County (1977), the soils on the property are classified as "Altamont-Fontana complex, 30 to 50 percent slopes" (AcF). Where the soils are bare, runoff is rapid and the hazard of erosion is high. The shrink-swell potential is "high" and corrosivity to uncoated steel is "high". The bedrock in cut slopes is subject to rapid weathering and weathered rock may not perform satisfactorily at 2:1 (horizontal to vertical) cut or fill slopes.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VII.	HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
	a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✔
	b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✔
	c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✔
	d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✔
	e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✔
	f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✔

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✔
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		✔		

Discussion:

a-g) The proposed project is a residential subdivision which will not create hazards through the transport of hazardous materials; it will not release hazardous materials or emit hazardous emissions; the site is not listed as a hazardous materials site; the site is not identified on an airport land use plan or located in close proximity to an airport landing strip. The project site is located off of a major arterial that could be considered an emergency evacuation route. Access to the development would be from this roadway. The development does not interfere with the emergency route or the emergency response plan.

h) Residents of the development would be subject to wildland fires since lands to the south and west would remain as grazing land. Recommendations of the Fire District to protect houses from wildland fires will be included in the EIR. The project also will be located adjacent to the Naval Weapons Station explosive safety easement.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	✔			
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✔
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	✔			

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	✔			
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	✔			
f)	Otherwise substantially degrade water quality?				✔
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✔
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✔
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	✔			
j)	Inundation by seiche, tsunami, or mudflow?	✔			

Discussion:

a.) Development of the proposed project would require extensive clearing and mass grading of the site. These activities could increase on-site soil erosion, potentially resulting in increased sediment accumulations and loss of flow capacity within Lawlor Creek and downstream drainage culverts. In addition, this sedimentation could adversely affect existing wildlife habitat by covering vegetation and by increasing turbidity in both Lawlor Creek and the Suisun Bay discharge channel.

b.) Groundwater recharge in the Los Medanos hills primarily occurs as seepage through granular soils and pervious bedrock deposits within stream channels. Although several natural drainages begin on or immediately upstream of the site, there are few signs of the eroded, incised channels where seepage is most likely to occur. In addition, soils throughout the project site are characterized as clay and silty clay loam, neither of which have high percolation rates. As a result, even though much of the site would be covered by impervious surfaces and stormwater runoff that now flows through natural drainage channels would be routed into underground culverts, it is not expected this would significantly change the existing low rate of groundwater recharge or adversely affect any existing or proposed wells in the vicinity.

c.) Covering large areas of the site with impervious surfaces would significantly increase the existing peak rate and total volume of stormwater runoff by reducing the amount of rainfall that seeps into surface soils and by increasing the efficiency of the stormwater collection system. The resulting higher and more prolonged flow rates would be expected to increase erosion of the Lawlor Creek channel and increase

sedimentation throughout the downstream drainage system. (It is noted that even soils with low percolation rates absorb considerably more rainfall than impervious building or pavement surfaces. Near surface soil layers with a healthy grass cover contain many voids and depressions that temporarily hold water during a storm. This water filters down into the groundwater table if the soils are highly pervious, or gradually seeps out of the hillside after peak runoff rates have subsided if percolation rates are low.)

d.) According to the Federal Emergency Management Agency's Flood Insurance Rate Maps, properties on both sides of Lawlor Creek, from Bailey Road to Willow Pass Road, are located within a 100-year flood hazard area. In addition, the Contra Costa Flood Control and Water Conservation District has received numerous flooding complaints from property owners and residents of this area. The higher peak flow rates expected to result from project development, as described in the previous impact, would likely worsen these existing conditions by increasing the depth, extent and/or duration of localized flooding.

e.) Several sections of Lawlor Creek, downstream of the project site, already lack sufficient capacity to accommodate peak, existing condition stream flow rates. Higher rates of runoff from the project site would increase these flows and worsen the existing downstream capacity deficiencies. Project development would also generate urban pollutants, primarily (but not necessarily limited to) the heavy metals, tire fragments and oil and grease associated with automobile traffic. These materials would be washed into on-site storm drains and eventually into Lawlor Creek, degrading downstream water quality.

f.) The urban pollutants described in the previous impact would be the only significant sources of pollution expected to degrade water quality.

g.) No part of the project site is located within a documented 100-year flood hazard area.

h.) There would be no construction associated with the proposed project that would impede or redirect flood flows within a 100-year flood hazard area.

i.) Potentially Significant Impact
There are no levees or dams on the project site or within the Lawlor Creek watershed. However, as described in a previous impact, increased runoff from the project site could worsen downstream flooding and potentially threaten existing private structures and public improvements.

j.) There are no large bodies of water in the project vicinity that could generate a seiche or tsunami. However, some proposed homesites at the north end of the site would be located below relatively steep, natural slopes that could be subject to mud or debris flows, a sudden soil slump that occurs in response to a heavy rainfall on fully saturated ground.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?				✔

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?		✔		
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				✔

Discussion:

a) The project site is located at the edge of the Pittsburg planning area and will not divide an established community.

b) The applicant is requesting a General Plan Amendment, Rezoning and Annexation that would redesignate the site from Agriculture and Open Space to Residential and Open Space. The County's General Plan designates the site for Agriculture and the City's Draft General Plan (in progress) designates the site for residential use. Amending the General Plan would bring the project into conformance with the City's Draft General Plan. Specific policies will require analysis in the EIR to determine whether the project conforms.

c) No adopted Habitat Conservation Plan or Natural Community Conservation Plan encompasses the site or surrounding lands, and no adverse impacts are anticipated

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
X.	MINERAL RESOURCES — Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✔
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✔

Discussion:

a-b) The California Department of Conservation has issued a report that classifies the mineral resource potential of lands in the San Francisco Bay Region (DMG Open File Report 96-03). According to this map, the site is within MRZ-4 which is defined as an area where "information is inadequate for assignment into any other MRZ zone". However, there are no active, inactive or proposed mines in the vicinity of the site, and there are no mines in the outcrop belt of the Markley Formation – Lower Member (Tmkl).

The Conservation Element of the Contra Costa County General Plan identifies locally designated mineral resource areas. Figure 8-4 in the General Plan indicates that the nearest mineral resource area is approximately four miles south of the site.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XI.	NOISE — Would the project:				
	a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✔			
	b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				✔
	c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	✔			
	d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✔	
	e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✔
	f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✔

Discussion:

a) Spot noise measurements were taken by Illingworth & Rodkin, noise consultants for the EIR, during the middle of the afternoon 55 feet from the center of the roadway. These measurements registered 66 dBA CNEL. Existing noise exposure levels exceed the 65 dBA CNEL.thresholds of the City's General Plan at the nearest proposed residential property. Given the existing exterior noise exposure levels, the City's interior noise threshold (45 dBA CNEL) may be exceeded.

b) Residents of the development will not be exposed to groundbourne noise or vibration.

c) Noise levels will increase as a result of the project traffic. This may become evident along Bailey Road south of the project site within the City of Concord as the roadway passes residential neighborhoods.

d) Construction noise will raise ambient levels in the project vicinity. Construction will be contained to daytime hours and subject to the City's noise ordinance.

e and f) The project site is not located within an airport land use plan or in the vicinity of a private airstrip. Thus, no noise impacts as a result of air traffic would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XII.	POPULATION AND HOUSING — Would the project:				
	a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✔	
	b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✔
	c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✔

Discussion:

a) The proposed project would add 319 housing units to the City's housing supply, resulting in a potential increase in population of 957 persons (based upon 3 persons/unit). The City's Draft General Plan accounts for development of the site and the additional population (Draft Plan, page 2-21).

b&c) The project site is undeveloped, thus no housing or people would be displaced.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIII.	PUBLIC SERVICES —				
	a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	• Fire protection?	✔			
	• Police protection?	✔			
	• Schools?	✔			
	• Parks?	✔			
	• Other public facilities?	✔			

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact

Discussion:
a) The proposed project will create a demand on all city services and special districts. The impacts of the project on these services will be discussed in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIV. RECREATION —				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	✔			
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	✔			

Discussion:
a) The increase in population due to the project will create a demand for existing City recreational facilities. The EIR will provide an evaluation of the potential impacts on recreational facilities.

b) The preliminary subdivision plan does not include recreational facilities. The lack of such facilities will be discussed in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC — Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	✔			
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	✔			

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✔
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✔
e)	Result in inadequate emergency access?			✔	
f)	Result in inadequate parking capacity?				✔
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?		✔		

Discussion:

a. The proposed project will be expected to generate about 3,054 daily two-way trips with 61 inbound and 179 outbound trips during the AM peak hour and 207 inbound and 115 outbound trips during the PM peak hour. Near term horizon Base Case two-way PM peak hour traffic along Bailey Road would be increased by 13% south of the site and by 14% north of the site due to project vehicles. Project traffic will produce significant impacts at both the Bailey Road/Myrtle Drive and Bailey Road/Concord Boulevard intersections in Concord. Unacceptable delay will also be experienced by project vehicles attempting to turn from both project access driveways to Bailey Road during the commute peak traffic hours. City of Concord staff indicate that mitigation measures may be infeasible at one or both intersections impacted in their city.

b. Preliminary traffic studies conducted by the EIR traffic consultant indicate that project traffic will cumulatively contribute to unacceptable operation to two intersections along Bailey Road in Concord (based upon current Central County CMA operating standards). The two project access intersections will also experience unacceptable operating conditions based upon the most recent East County Action Plan standards of significance for Bailey Road in Pittsburg.

c. The proposed project does not interfere with air traffic patterns.

d. There are no hazards identified on the site plan that could result in an impact of the project. No impact.

e. The local fire district needs to review and approve proposed internal circulation and access.

f. All project roadways would conform to City of Pittsburg Hillside Design Standards.

g. No provisions have been made for bus turnouts along Bailey Road adjacent to the site or along any internal roadway.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVI.	UTILITIES AND SERVICE SYSTEMS — Would the project:				
	a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✔	
	b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✔
	c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	✔			
	d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	✔			
	e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	✔			
	f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	✔			
	g) Comply with federal, state, and local statutes and regulations related to solid waste?				✔

Discussion:
a-f) The project will place a demand on public utilities and will require annexation to the Delta Diablo Sanitary District. Utilities must be contacted during the EIR process to determine whether capacity and supply are adequate to serve the project.

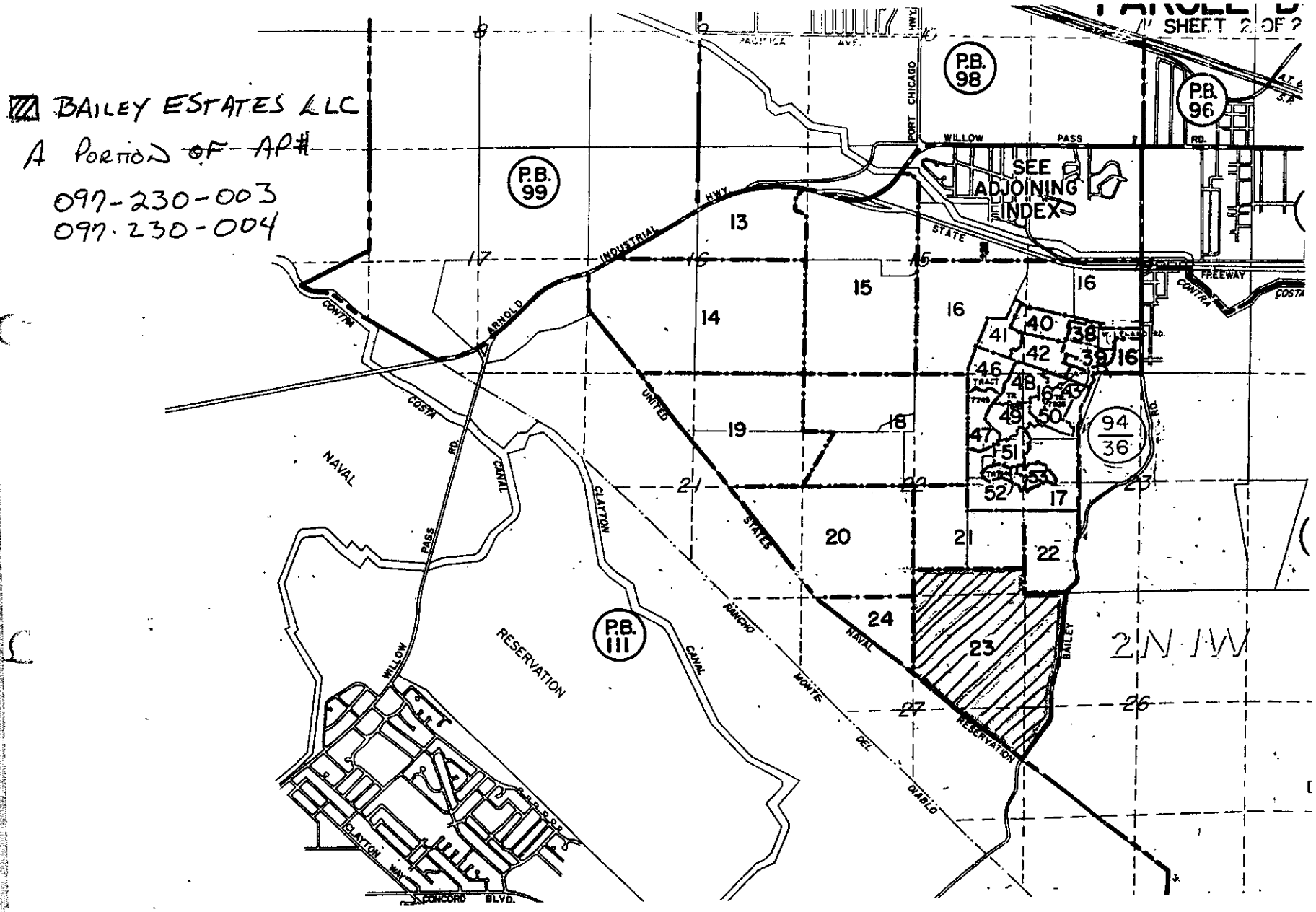
g) The solid waste hauler for the City of Pittsburg provides recycling opportunities for residents of the City. The project by itself does not have to comply with federal, state and local statutes.

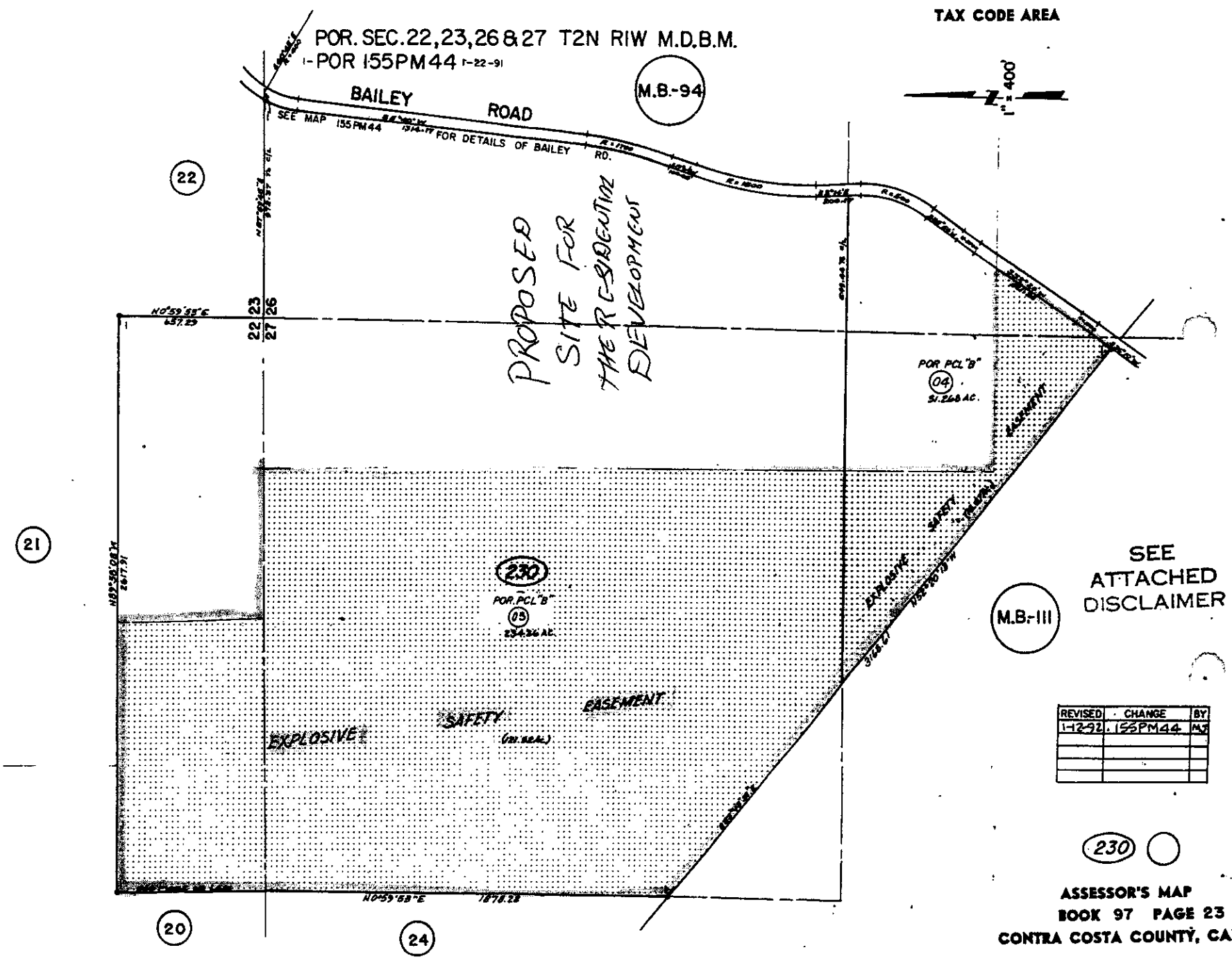
		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVII.	MANDATORY FINDINGS OF SIGNIFICANCE —				

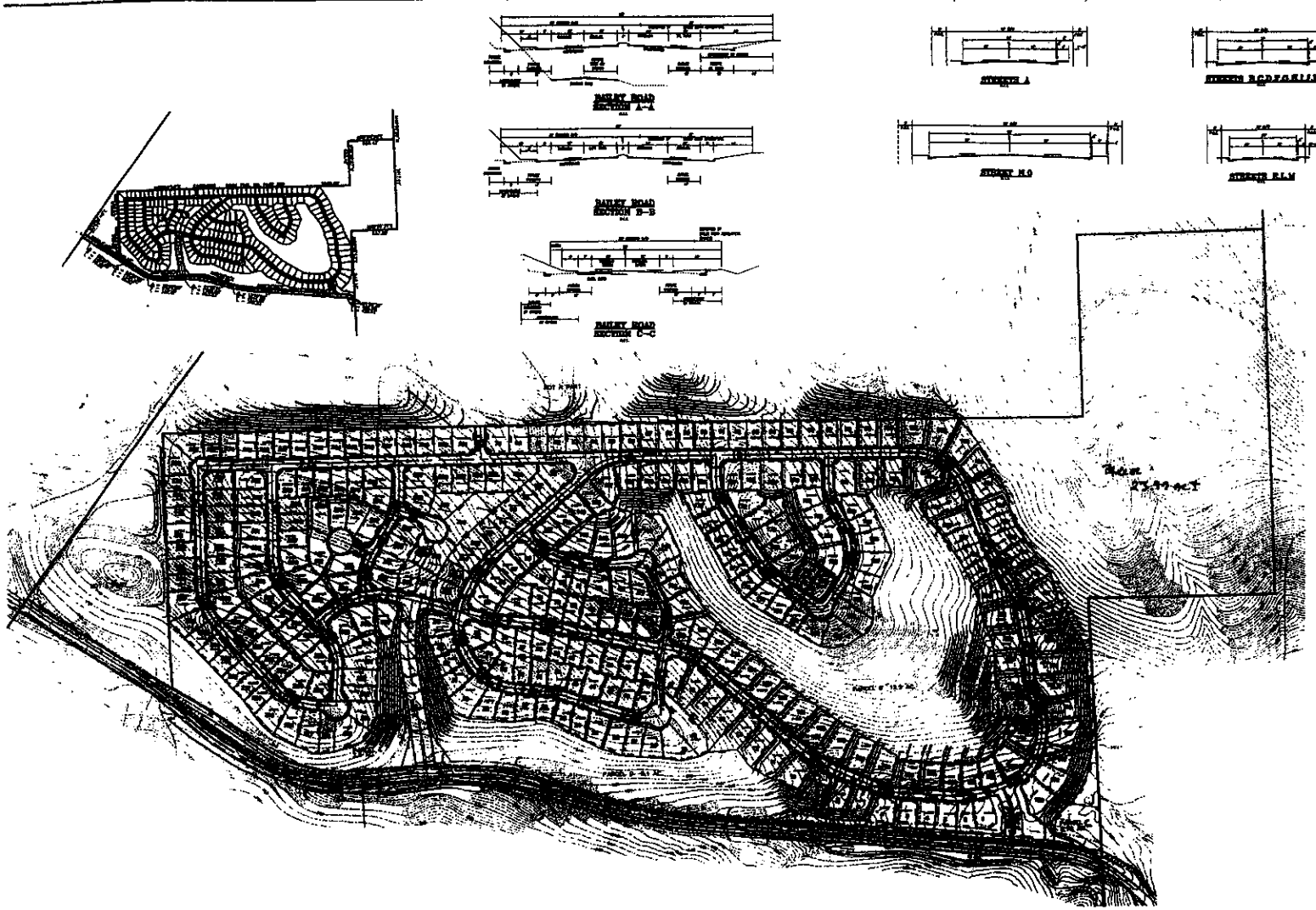
		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✔			
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	✔			
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	✔			

Discussion:

a-c) Based upon analysis of preceding issues, potentially significant impacts in a,b and c, above will necessitate the need for an EIR.


BAILEY ESTATES LLC
A PORTION OF APN
097-230-003
097-230-004
SHEET 2 OF 2
SEE ADJOINING INDEX
P.B. 98
P.B. 96
P.B. 99
P.B. 111
94/36
2N 1W
PACIFIC AVE.
PORT CHICAGO HWY.
WILLOW PASS RD.
STATE
CONTRA COSTA FREEWAY
INDUSTRIAL HWY
ARNOLD
CONTRA COSTA CANAL
NAVAL RESERVATION
WILLOW PASS
CLAYTON
UNITED STATES
RANCHO MONTE DEL DIABLO CANAL
BAILEY
CLAYTON WAY
CONCORD BLVD.


TAX CODE AREA
POR. SEC. 22, 23, 26 & 27 T2N R1W M.D.B.M.
1-POR 155PM44 1-22-91
M.B.-94
BAILEY ROAD
SEE MAP 155PM44 FOR DETAILS OF BAILEY RD.
1" = 400'
22
23
26
27
PROPOSED SITE FOR THE RESIDENTIAL DEVELOPMENT
POR PCL "B"
04
51.268 AC.
21
230
POR. PCL "B"
03
234.26 AC.
EXPLOSIVE
SAFETY
EASEMENT
N89°38'08"W
2617.51
N0°59'58"E
1878.28
20
24
M.B.-111
SEE ATTACHED DISCLAIMER
REVISED
CHANGE
BY
1-1292. 155PM44
230
ASSESSOR'S MAP
BOOK 97 PAGE 23
CONTRA COSTA COUNTY, CALIF



BAILEY ROAD
SECTION A-A

BAILEY ROAD
SECTION B-B

BAILEY ROAD
SECTION C-C

STREET A

STREETS B,C,D,E,F,G,H

STREET H.O

STREETS K,L,M

VICINITY MAP
NOT TO SCALE

GRAPHIC SCALE

CSW | St[2]	VESTING TENTATIVE MAP - SUBDIVISION 9456 BAILEY ESTATES BAILEY ESTATES, LLC
	C1

NOP LIST

City of Concord
Community Development Dept.
Attn: Dave Golick
1950 Parkside Dr.
Concord, CA 94520

City of Clayton
Community Development Dept.
Attn: Jeremy Graves
6000 Heritage Trail
Clayton, CA 94517

City of Antioch
Community Development Dept
Attn: Victor Carniglia
P.O. Box 130
Antioch, CA 94509

Contra Costa Water District
Concord, CA 94520
1331 Concord Ave.
P.O. Box H2O
Concord, CA 94520

Delta Diablo Sanitation District
2500 Pittsburg/Antioch Hwy
Antioch, CA 94509

BART District
Attn: Jeff Ordway
P.O. Box 12688
Oakland, CA 94607-2688

Contra Costa Water District
1331 Concord Ave.
P.O. Box H2O
Concord, CA 94524

EBMUD
Distribution Planning
P.O. Box 24055 M/S 701
Oakland, CA 94623-1055

CCTA
Pacific Plaza Building
1340 Treat Blvd., Suite 150
Walnut Creek, CA 94596

BAAQMD
Attn: Don Van Buren
939 Ellis St.
San Francisco, CA 94109

Los Medanos College
2700 E. Leland Rd.
Pittsburg, CA 94565

Contra Costa Resource Conservation District
5552 Clayton Rd.
Concord, CA 94521

Antioch Unified School District
510 "G" St.
Antioch, CA 94509

PG & E
Attn: Richard A. Gyliatti
1030 Detroit Ave.
Concord, CA 94513

Bay Point Municipal Advisory Committee
3105 Willow Pass Rd.
Bay Point, CA 94565

Supervisor Joe Canciamilla
315 E. Leland Rd.
Pittsburg, CA 94565

East Bay Regional Park District
2950 Peralta Oaks Court
P.O. Box 5381
Oakland, CA 94605

MTC
Metro Center
101 Eighth St.
Oakland, CA 94607-4756

Mt. Diablo Unified School District
1936 Carlotta Dr.
Concord, CA 94519

Tri Delta Transit
801 Wilbur Ave.
Antioch, CA 94509

California Cities Water
53 Manor Dr., #B
Bay Point, CA 94565

TRANSPLAN
651 Pine St., 4th Floor
Martinez, CA 94553

Pittsburg Unified School District
Gloria Gamblin, Business Manager
2000 Railroad Ave.
Pittsburg, CA 94565

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604

Ambrose Recreation & Park District
3105 Willow Pass Rd.
Bay Point, CA 94565

CIWMB
Attn: Vincent Paul
8800 Cal Center Dr.
Sacramento, CA 95826

Delta Protection Commission
Attn: Margit Aramuru
P.O. Box 530
Walnut Grove, CA 95690

County Agencies
Contra Costa County Flood Control District
255 Glacier Dr.
Martinez, CA 94553

CCC Public Works Dept.
255 Glacier Dr.
Martinez, CA 94553-4897

CCC Sheriff's Department
651 Pine St., 7th Floor
Martinez, CA 94553

Contra Costa County Community Development Dept.
Attn: Catherine Kutsuris
651 Pine St.
Martinez, CA 94553

Contra Costa County Fire Protection District
Attn: Frank Boyle
2010 Geary Rd.
Pleasant Hill, CA 94523

Contra Costa County Health Service Dept.
William B. Walker, MD
20 Allen St.
Martinez, CA 94553

Contra Costa County Library
80 Power Ave.
Pittsburg, CA 94565

County Agencies
Contra Costa County Assessors Office
834 Court St.
Martinez, CA 94553

LAFCO
651 Pine St
Martinez, CA 94553

Federal Agencies
Federal Transit Administration
201 Mission St., Suite 2210
San Francisco, CA 94105-1800

Department of the Navy
Corps of Engineers
333 Market St., 8th Floor
San Francisco, CA 94105-2107

Fish & Wildlife Services
Joel A. Medlin, Field Supervisor
3310 El Camino Ave., Suite 130
Sacramento, CA 95821-6340

Pittsburg Post Office
835 Railroad Ave.
Pittsburg, CA 94565

Other
East Bay Area Trails Council
C/o Geoff Carter, President
2950 Peralta Oaks Court
Oakland, CA 94605

Greenbelt Alliance
Attn: Tom Mooers
500 Ygnacio Valley Rd.
Walnut Creek, CA 94596

Save Mt. Diablo
Attn: Seth Adams
P.O. Box 5376
Walnut Creek, CA 94596

State Clearinghouse (11 copies are mailed)
Office of Intergovernmental Mgt.
1400-10th St., Room 121
Sacramento, CA 95814

CALTRANS
P.O. Box 23660
Oakland, CA 94623-0660

Department of Fish & Game
Central Coast Rigion
Habitat Conservation
P.O. Box 47
Yontsville,

RWQCB
San Francisco Bay Region
2101 Webster, ST., Suite 500
Oakland, CA 94612

Historical Resources Information System
Bldg. 300-1801 E. Cotati Ave.
Rohnert Park, CA 94928-3608

Public Utilities Commission
1227 "O" St, 4th Floor
Sacramento, CA 95814

Resources Agency
1416 Ninth St.
Sacramento, CA 95814

Native American Commission
915 Capital Mall, no. 288
Sacramento, CA 95814

Department of Park & Recreation
P.O. Box 942396
Sacramento, CA 94296

Other

Ledger Dispatch
1700 Cavallo Rd.
Antioch, CA 94509

Sierra Club
San Francisco Bay Chapter
2530 San Pablo Ave., Suite 1
Berkeley, CA 94702

Michael Woods, City Attorney
786 Broadway
Sonoma, CA 95476-7011

Pacific Bell Engineers
Attn: Lou Rosas
1600 S. Main St, Suite 202
Walnut Creek, CA 94596

[1] Revised 9/19/99 C/CB

B. COMMENTS AND RESPONSES TO ORIGINAL DEIR & RESCINDED FEIR

Appendix B
COMMENTS AND RESPONSES TO THE ORIGINAL DEIR AND RESCINDED FEIR

Comment Letters on the Original DEIR

State of California

Letter 1	California Historical Resources Information System, Northwest Information Center, Sonoma State University	January 30, 2002
Letter 2	California State Department of Transportation (Caltrans)	March 15, 2002

Districts

Letter 3	Contra Costa Water District	February 27, 2002
Letter 4	Contra Costa Water District	March 4, 2002
Letter 5	East Bay Municipal Utility District	February 19, 2002
Letter 6	East Bay Regional Park District	February 25, 2002

Contra Costa County

Letter 7	Community Development Department	March 4, 2002
Letter 8	Local Agency Formation Commission (LAFCO)	January 29, 2002
Letter 9	Transpac Transportation Partnership and Cooperation	February 26, 2002
Letter 10	Transplan Committee, East County Transportation Planning	March 14, 2002

Cities

Letter 11	City of Antioch	February 20, 2002
Letter 12	City of Concord	February 27, 2002

Individuals and/or Organizations

Letter 13	Cooper, White & Cooper, LLP	March 14, 2002
Letter 14	Greenbelt Alliance	March 21, 2002
Letter 15	Miller, Brown & Dannis (for Mt. Diablo Unified School District)	February 28, 2002
Letter 16	Miller, Brown & Dannis (for Mt. Diablo Unified School District)	March 15, 2002
Letter 17	Seecon Financial & Construction Co., Inc.	February 12, 2002

Planning Commission Hearing

18	Minutes of the Planning Commission • Richard Sestero • Warren Smith	February 12, 2002

Comment Letters on the Rescinded FEIR

Districts

Letter 19	Contra Costa Water District	October 14, 2002

Cities

Letter 20	City of Concord	October 15, 2002

Individuals and/or Organizations

Letter 21	Edward L. Shaffer (Archer Norris)	October 15, 2002
Letter 22	Edward L. Shaffer (Archer Norris)	October 29, 2002

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1303 Maurice Avenue
Rohnert Park, California 94928-3609
Tel: 707.664.0880 • Fax: 707.664.0890
E-mail: nwic@sonoma.edu

Letter 1

30 January 2002

File # 01-CC-122E

Mr. Randy Jerome
Planning and Building Director
City of Pittsburg City Hall
65 Civic Avenue
Pittsburg, CA. 94565

Re: Draft Environmental Impact Report for Bailey Road Estates

Dear Mr. Jerome:

Thank you for including the Northwest Information Center in the environmental review process for the Bailey Road Estates. We examined the above-reverenced document and due to the high to moderate sensitivity of the areas being considered this office is recommending a project-by-project evaluation. 1-1

Thank you for your continued concern for protecting our historical heritage.

Sincerely,

K. Thorne, for
Leigh Jordan, M.A.
Coordinator

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COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

LETTER
1
RESPONSE

California Historical Resources Information System
K. Thorne, for Leigh Jordan, M.A., Coordinator
Northwest Information Center, Sonoma State University
January 30, 2002

1-1 Information is noted. Section 4.9 of the Draft EIR acknowledges the potential for undiscovered cultural resources that may be unearthed during construction on the project.

DEPARTMENT OF TRANSPORTATION
P. O. BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
(510) 286-4454 TDD

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COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

Flex your power!
Be energy efficient!

March 15, 2002

CC-4-20.1
CC004595
SCH# 2001022016

Letter 2

Mr. Randy Jerome
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Jerome:

Bailey Road Estates – Draft Environmental Impact Report (DEIR)

Thank you for including the California Department of Transportation in the environmental review process for the above-referenced project. We have reviewed the DEIR, and have the following comments:

1. The DEIR does not contain any calculations and analysis for the impacts the project will have to the State Route 4 (SR 4) mainline and on- and off-ramps. Improvements to mitigate any impacts to state facilities should be identified and be included as part of the project. Please submit an analysis of SR 4 and its on- and off-ramps in the vicinity of the project for our review. We would also like to review any improvements proposed to mitigate impacts to SR 4. **2-1**

2. The DEIR also does not include any discussion of potential hazardous materials in the project soil. An Initial Site Assessment will be necessary to identify any potential hazardous materials, and this may need to be followed up by actual soil sampling and testing in a second phase environmental assessment. **2-2**

Should you require further information or have any questions regarding this letter, please call Rick Kuo, of my staff at (510) 286-5988.

Sincerely,

for JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: Katie Shulte Joung (State Clearinghouse)

"Caltrans improves mobility across California"

LETTER 2 RESPONSE

Department of Transportation
Rick Kuo for Jean C.R. Finney,
District Branch Chief, IGR/CEQA
March 15, 2002

2-1 The project's impacts to the State Route 4 (SR 4) freeway are discussed in response to comment 10-2.

The intersections of the freeway on-ramps and off-ramps with Bailey Road have been studied in the Draft EIR, and further analysis of those intersections (along with the other study intersections) is shown in response to comment 10-4. This analysis identifies a new impact (Impact 4.4-4) at the eastbound freeway off-ramp at Bailey Road. (Refer to response to comment 10-4.)

2-2 There are no known hazardous materials on site as indicated on the Environmental Checklist in Appendix A of the Draft EIR, nor are hazardous materials likely to exist on the site. The land has always been used for cattle grazing.

CONTRA COSTA
WATER DISTRICT

1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

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PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

Letter 3

February 27, 2002

Directors
James Pretti
President

Noble O. Elcenko, D.C.
Vice President

Elizabeth R. Anello
Bette Boatmun
Joseph L. Campbell

Walter J. Bishop
General Manager

Drummond Buckley
Mills Associates
3744 Mount Diablo Boulevard, Suite 303
Lafayette, California 94549

Subject: Bailey Road Estates Draft EIR Information Reference

Dear Mr. Buckley:

This is in reference to a statement in the Draft EIR for the Bailey Road Estates project relative to water supply. It is my understanding that you prepared the analysis on Water Supply on page 4.7-14 of the document. The particular statement relates to projects, such as the Bailey Road Estates proposal, which are identified outside the Contra Costa Water District's (CCWD's) Service Area C (as contained in the Future Water Supply Study or FWSS), and the Los Vaqueros Project (LVP) Planning Area. The statement from the document is:

> "Furthermore, consistent with CCWD guidelines, when currently-known cumulative projects outside of Service Area C are considered, the project will not result in a cumulative increase in demand greater than 5 percent above the water demand specified in the CCWD 1996 Future Water Supply Study."

3-1

Please delete this statement from the Draft EIR. The statement is not correct, a determination has not been made, and the cumulative increase analysis requested in the CCWD NOP Response dated March 7, 2000 (see Attachment 1, page 4, third paragraph) has not been provided in the Draft EIR. Any reference to the possibility of including this project in the FWSS Scenario C and LVP Planning Area buildout demands should follow the guidance in the NOP Response, and the specific CCWD Regulations (see Attachment 2).

If you have any questions, please call me at 925/688-8119.

Sincerely,

Dennis Pisila
Senior Planner

Attachment 1: CCWD NOP Response dated March 7, 2000
2: CCWD Code of Regulations Section 5.04.120

cc: Randy Jerome, City of Pittsburg

CONTRA COSTA
WATER DISTRICT

1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

Directors
James Pretti
President

Noble O. Elcenko, D.C.
Vice President

Elizabeth R. Anello
Bette Boatmun
Joseph L. Campbell

Walter J. Bishop
General Manager

March 7, 2001

Via Fax 925/252-4814

Avanindra K. Gangapuram, Project Planner
Community Development Department
City of Pittsburg
65 Civic Avenue
Pittsburg, California 94565

Subject: Response to Notice of Preparation on Bailey Road Estates Development

Dear Mr. Gangapuram:

Thank you for the opportunity to respond to the Notice of Preparation (NOP) for the Bailey Road Estates Development proposal. The project is not within the existing service area boundaries of the Contra Costa Water District (CCWD). However, since the City of Pittsburg is a CCWD raw water customer, it is presumed that the project will also need to be annexed to CCWD, and approved by the U.S. Bureau of Reclamation as an inclusion to the CCWD Central Valley Project (CVP) water supply service area, in order to have a water supply.

The project will require a General Plan Amendment, Rezoning and Annexation for the development of 319 single-family residential units on 122 acres of the 265-acre site (Assessor Parcels 97-230-003 and -004). The remaining portion of the site would remain in open space as part of the explosive safety easement for the Concord Naval Weapons Station (CNWS). As stated, the application requires annexation to the City of Pittsburg and Delta Diablo Sanitary District. The project is located on the west side of Bailey Road between the cities of Pittsburg (adjacent to the north) and Concord, including the CNWS (adjacent to the south), on Willow Pass ridge.

It will be important that the project applicant (Bailey Estates LLC, John Stremel) work closely with CCWD in addressing a number of issues that will need to be resolved before a CVP water supply can be provided by CCWD and the City of Pittsburg to the project. The following comments are made in the progression of the Initial Study portion of the NOP.

Page 1. In the Description of project (item 8), annexation will also be required into CCWD if the intent is to supply water from CCWD to the site. Also, under other public agency approvals (item 10), it will be necessary for the U.S. Bureau of Reclamation to approve inclusion into the CVP contractual service area for CVP water.

Pages 5-8. In the Biological Resources Checklist Element IV, it is noted that items (a) through (e) addressing sensitive species directly, riparian and sensitive species habitat, wetlands, wildlife migratory movement and conflict with local policies on the protection of biological resources were each checked as receiving "Potentially Significant Impact" from the project. It is further noted (page 7) that a detailed assessment of the potential for occurrence of special-status species "must be conducted" to confirm presence or absence and the potential impacts of the project on any species found at the site. A number of species of concern considered to have a potential for occurrence on the site are also listed.

In the third paragraph on page 7, however, it is already concluded that the site provides "at least marginal habitat for most of the [stated] species, but the only assessment available [at this time] is an *Early Evaluation Report* for San Joaquin kit fox prepared by the applicant". The *Report* concludes "occurrence of San Joaquin kit fox on the site is unlikely", but [that] a peer review of the *Report* conclusions is necessary. Also, "at minimum", additional detailed surveys must be conducted to determine [the] presence or absence of special-status plant species, California tiger salamander, and bird species of concern.

In the second paragraph of page 8, it noted that a preliminary *Wetland Delineation* (December 1994) identified 2.83 acres of wet meadow jurisdictional wetlands in the northeast corner of the site. It is indicated that the wet meadow should be considered a sensitive natural community. However, this feature would be mostly eliminated by the project, as proposed [i.e., a significant impact, as indicated in the checklist, with no plans for protection or replacement]. As noted, the *Wetland Delineation* may not be verified [as yet] by the U.S. Army Corps of Engineers.

CCWD was required to prepare an Interim Service Area map (current edition dated June 2000, copy provided to City of Pittsburg), as part of the Los Vaqueros Project (LVP) Biological Opinion on the San Joaquin Kit Fox and Bald Eagle, which indicates the following:

1. No occurrences of listed species are shown in the immediate area of the proposed project.
2. The range of the San Joaquin Kit Fox, however, terminates approximately 0.25 mile to the east of the project and across Bailey Road.
3. Three occurrences of the California Tiger Salamander (a Federal Species of Special Concern) are shown inside the CNWS to the southwest, at distances ranging from adjacency to the blast zone portion of the applicant's ownership to approximately 0.5 mile.

The range of the San Joaquin Kit Fox is based on historical sightings or reported occurrences information. It is noted from the Interim Service Area map supporting information (Table 1) that the potential habitat for the California Tiger

Salamander is grassland with seasonal wetlands.

CCWD recommends that all federally-listed species issues be addressed in the Environmental Impact Report (EIR) for proper evaluation by Reclamation in any future CVP inclusion application. If federally-listed species are identified at the project, there are three optional processes currently available in order to obtain federal agency concurrence on local projects:

1. complete a section 7 consultation under the provisions of the Federal Endangered Species Act (FESA) with either Reclamation or another federal agency.
2. obtain a section 10 (a) (1) (B) permit under FESA from the U.S. Fish and Wildlife Service (USFWS) or,
3. fall within the jurisdiction of a regional Habitat Conservation Plan or HCP.

Private party applicants are encouraged by Reclamation to undertake FESA section 10 consultation directly with the USFWS.

Element IV. f indicates that no adopted HCP, Natural Community Conservation Plan (NCCP) or other local, regional, or state conservation plan encompasses the site or surrounding lands, and no adverse impacts are anticipated. It should be noted, however, that the project site does fall within the planning area of the proposed East Contra Costa County HCP/NCCP. The HCP Authority is composed of four east Contra Costa County cities, including the City of Pittsburg, CCWD, East Bay Regional Park District (EBRPD) and the City of Clayton. An HCP process is envisioned to take several years before local agency and resource agencies (USFWS, California Department of Fish and Game and U.S. Environmental Protection Agency) approvals.

Pages 13 and 14. In the Hydrology and Water Quality Element VIII., item (e), CCWD is in agreement that the project could create or contribute to runoff which would exceed the capacity of [the] existing or planned stormwater drainage system. Construction runoff could create significant erosion and sedimentation that may further reduce the normal and peak carrying capacity of Lawlor Creek, which generally parallels Bailey Road to the vicinity of State Highway 4 and the Contra Costa Canal 1.5 miles to the north. The Contra Costa Canal is the primary conveyance of the CVP water supply from the San Joaquin Delta to the central Contra Costa County area.

However, CCWD is particularly concerned over the increased runoff and its velocity that would be created from impervious urban uses and the potential impact on the Canal itself and the public water supply. The increased runoff at the project elevation (680-800 feet), and the gradient of Lawlor Creek (8.5% average to the Canal) could combine to cause overtopping into the Canal if the existing box culvert under the Canal is inadequate. In the analysis, it is stated that urban pollutants could be generated (e.g., heavy metals, tire fragments, oil, grease) that could become part of the runoff.

CCWD, therefore, requests that the Draft EIR include verification figures by engineering analysis on the stormwater production volumes and the capacity of downstream culverts, including the box culvert under the Canal to accommodate peak runoffs. The calculations need to incorporate estimates of sedimentation on the stream channel and stormwater facilities capacities over time. CCWD would prefer calculations for 100-year (minimum) recurrence flood levels. If the calculations indicate potential conditions similar to the CCWD concerns over pollution and water quality, it would be important to propose appropriate mitigation, including detention or retention basins, downstream improvements and regular stormwater facility maintenance to prevent such conditions. It is imperative that the water supplies in the Contra Costa Canal be protected, as they provide drinking water for the entire community of approximately 430,000 population.

Page 20. In the Utilities and Service Systems Element, item d, CCWD is in agreement that the project could have a significant impact on the sufficiency of existing water supplies from existing entitlements and resources. This agreement is based on the fact that this particular project site was not designated for urban development in the current Pittsburg General Plan (1988), and therefore, was not included in CCWD's Future Water Supply Study (FWSS, 1996), nor within the water quality benefits of the LVP (LVP Draft EIR/S, 1992, Table 1-1). The FWSS compared local agency general plan land use demands under buildout conditions (with projections to 2040) with the existing CCWD water supply entitlements and agreements. The result is that the project site is outside any CCWD planning studies and plans for future service, including the FWSS and the Future Water Supply Implementation (FWSI) program, the LVP Planning Area and the planning area for the new Multi-purpose Pipeline Project (MPP) due for construction in 2001.

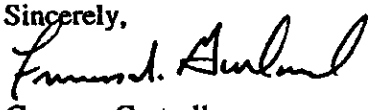
To address this, the Draft EIR should provide an evaluation of the project water demands combined with the FWSS Scenario C demands, and the water demands projected for other projects outside the LVP Planning Area to determine if CCWD can issue a *de minimis* determination. Scenarios C covers the existing and projected future CCWD boundaries. The cumulative increase in demand from the subject project and all other past and pending annexations must not exceed 5% of the projected buildout water demands as presented in the LVP EIR/S Table 1-1, in order for a *de minimis* determination to be made.

In the Discussion for items (a)-(f), it should have indicated that the project will also need to be annexed into CCWD (i.e., if the CVP water supply is intended). The process for annexation to the CCWD (and for CVP water service) is contained in Code of Regulations 5.04.120 (copy provided as Attachment 1). It is recognized that the City of Pittsburg will initiate the annexation process with a reorganization application to the Contra Costa LAFCO. The application will need to include annexation to CCWD. It is incumbent that all issues relative to both the annexation to CCWD (including a substantiation that CCWD requirements for service have been or will be met, including a *de minimis* finding) and subsequent inclusion approval by Reclamation. The

requirements for inclusion approval include the meeting of environmental regulations, including the ESA compliance, as stated above in the three options, and other federal statutes (including the National Historic Preservation Act) and perfunctory application requirements (property description, mapping and required fees). Reclamation will also need to perform its own NEPA evaluation of the inclusion since this area was not included in previous Reclamation NEPA documentation (October 23, 2000) covering the FWSI area.

In summation, there are significant issues relative to the FESA (consultation requirements) and the inclusion approval process, and in determining water demands relative to other CCWD commitments and planning that need to be addressed by the applicant. It is incumbent that the applicant work with CCWD in addressing these issues and having them presented in the Draft EIR for City of Pittsburg and Responsible Agency decisionmaking. A major portion of the factual data necessary for LAFCO, CCWD, USFWS and Reclamation evaluations can be addressed within the scope of the Draft EIR. Please contact Dennis Pisila at 925/688-8119 for additional information pertinent to CCWD, Reclamation and USFWS information sources, personnel contacts, and regulations, as needed.

Sincerely,



FOR Gregory Gartrell
Director of Planning

GG/DP

Attachment 1: CCWD Code of Regulations Section 5.04.120 (Annexations)

cc: Cay Goude, Acting Field Director, U.S. Fish and Wildlife Service, Sacramento
Valerie Curley, Chief, Engineering, Maintenance and Operations, USBR, Tracy
John Stremel, Bailey Estates LLC

5.04.110 Unauthorized use of water.

Anyone using water without having made application to the district for water service shall be held liable for the service from the date of any previous meter reading that most nearly coincides with the actual date the service was first used by such customer. (Res. 90-84 Exh. A (part))

5.04.120 Annexation of land to the district and provision of water service to annexed lands.

The annexation of lands to the district is governed by the provisions of the Cortese/Knox Local Government Reorganization Act of 1985 (California Government Code Section 56000 et seq., cited in this section as the "Act"). This regulation supplements the provisions of the Act. In the event of any conflict between the provisions of the Act and this regulation, the former shall control.

The provision of water service to annexed land is governed by the regulations codified in this section. Subsection A contains the processes for annexation of lands to the district. Subsection B contains the processes for obtaining water service for annexed lands from either the district or from one of its wholesale municipal customers and applies to lands that are inside or outside either the district Central Valley Project (CVP) service area or the Los Vaqueros Project (LVP) service area. The regulation applies to requests for annexation to or detachments from CCWD, or annexation to CCWD as part of a reorganization, whether through requests directly to the district or by application to the Local Agency Formation Commission (LAFCO). The regulation also provides fees to offset the costs associated with administering these requirements.

Under the terms of the district's contract with the U.S. Bureau of Reclamation (Bureau) for CVP water, the Secretary of the Interior or the Secretary's duly authorized representative (Secretary) must formally consent to inclusion of newly annexed lands into the district before such lands can receive CVP water. The "CVP service area" refers to all those lands within the district that have received such consent.

The district's LVP is a water quality and reliability project. Water from LVP facilities is approved for use in a defined area as set forth in the permits and environmental documentation for the project. That area is referred to in this section as the "LVP service area" and includes the planning area for the LVP as defined in the Los Vaqueros Project Final Environmental Impact Report/Environmental Impact Statement (Draft Stage 2 EIR/EIS for the Los Vaqueros Project, February 1992, pp. 1-6—1-7) and any lands to which the district's board of directors has consented to service from LVP facilities. The district must approve the addition of any lands to the LVP service area before such lands can receive service from LVP facilities in order to ensure that such service is consistent with the permits, environmental documentation, objectives and planning for the LVP.

A. Annexation of Lands to the District.

1. The district will initiate proceedings (including annexations, detachments and reorganization) if: (a) evidence satisfactory to the district is presented that all, or a substantial portion, of the resident voters or property owners of the affected lands desire the action, (b) a map and legal description of the affected lands are submitted to the district, (c) the proponents of the proceedings pay the fees provided, and (d) the proponents agree to comply with the provisions of this regulation related to annexation of lands which are not within the district's CVP service area and/or not within the LVP service area. The initiation of proceedings by the board shall not restrict or impair the powers of the board in subsequent proceedings for annexation of the lands or any part thereof.

2. The fee for annexation of lands shall be a flat amount of eight hundred dollars for annexations that are not subject to the CVP inclusion process and one thousand two hundred dollars for annexations that are subject to the CVP inclusion process. This district fee is separate from any other fees which may be required by other agencies, including Bureau fees for processing an inclusion request. In addition, the district will be reimbursed for any direct costs e.g., legal description verification, attorney review costs, document reproduction costs, public notices, etc. Payment will be requested upon the proponent's formal applica-

tion to LAFCO or the district, and shall be made within thirty calendar days. The appropriate fee applies to proponents requesting annexation to or detachments from CCWD, or annexation to CCWD as part of a reorganization, whether through requests directly to the district or by application to the LAFCO.

B. Provision of Water Service to Annexed Lands.

1. No water shall be provided by the district to annexed lands unless and until a water supply is available for use on such lands, as confirmed in writing by the district. No water furnished by the CVP shall be provided by the district or any of its wholesale municipal customers for use on lands which are not in the district's CVP service area unless and until the Secretary gives written consent to the inclusion of such land in the district's CVP service area. A confirmation letter will be issued by the district for water service based upon a CVP water supply under the provisions of either subsection B1a or B1b set forth below; a confirmation letter for water service based on a non-CVP supply will be issued by the district under the provisions of subsection B1c set forth below.

a. At the time annexation is sought for the purpose of receiving treated water from the district, or an application is made for treated water service for lands previously annexed to the district, the district will notify the proponent of the annexation or the applicant for water service that the written consent of the Secretary is required before CVP water can be made available for use on the subject land. It shall be the responsibility of the proponent of the annexation or the applicant for water service to develop and provide the necessary environmental or other documentation necessary for such written consent. The district will pursue timely and prompt written consent decisions based on this documentation. The district will promptly issue the confirmation letter for treated water service utilizing CVP water after such consent has been received. No meter will be issued by the district for treated water service until a confirmation letter has been issued.

b. At the time annexation (or annexation to CCWD as part of a reorganization) is sought for the purpose of receiving water service from one of the district's wholesale municipal customers, or an application is made to such a customer for water service for lands already annexed to the district, the wholesale municipal customer shall notify the district of the request. The district will notify the proponent of the annexation or the applicant for service and the wholesale municipal customer that written consent of the Secretary is required before CVP water can be made available for use on the subject land. It shall be the responsibility of the proponent of the annexation or the applicant for water service or the wholesale municipal customer to develop and provide the necessary environmental or other documentation necessary for such written consent. The district will pursue timely and prompt written consent decisions based on this documentation. The district will promptly issue a confirmation letter to the wholesale municipal customer authorizing water service utilizing CVP water purchased from the district after such written consent has been received.

c. If the district determines that a non-CVP water supply has been identified and is available or can be made available by the district in a timely manner to provide the water service requested, the district will issue a confirmation letter to the proponent of the annexation or the applicant for water service, and if necessary the wholesale municipal customer, describing the water supply available and any conditions and/or restrictions that might apply to its use on the subject land. Provision and delivery of such water shall be made subject to the conditions and/or restrictions that apply to use of such water supply.

2. Water service from LVP facilities will not be provided to lands outside the LVP service area by the district or its wholesale municipal customers. This subsection describes the process by which the LVP service area can be adjusted by the district, and applies both to lands outside the LVP service area for which annexation to the district (either directly or through reorganization) is sought, and to lands previously annexed to the district which are outside the LVP service area and for which an application for water service is made to the district or to one of its wholesale municipal customers (which shall immediately inform the district when any such application is received). The district shall inform the annexation proponent, water service applicant and wholesale

municipal customer that the district will not provide service from LVP facilities unless the district determines that:

a. The requested wholesale or retail service can only be provided from district facilities which cannot feasibly be separated from LVP facilities;

b. The impact of the requested wholesale or retail water service on the LVP is de minimis; and

c. All necessary environmental documentation for the expansion of the LVP service area to include the land proposed for annexation to the district has been provided by the proponent of the annexation or the applicant for water service and approved by the appropriate regulatory agency.

A determination of de minimis will be made if the cumulative increase in demand from the subject annexation and all other past and pending annexations is less than five percent of the demands presented in the LVP EIR/EIS (Draft Stage 2 EIR/EIS for the Los Vaqueros Project, February 1992, as summarized in Attachment A). The district's determinations pursuant to this section will be transmitted in a confirmation letter to the applicant for water service or the proponent of the annexation and, if necessary, the wholesale municipal customer. If the district determines that a wholesale municipal customer is using LVP facilities to provide water service to lands outside the LVP service area prior to the district's determination to adjust the LVP service area, it will direct the wholesale municipal customer to immediately cease this unauthorized use of district facilities. The water supply available to the wholesale municipal customer will be subject to immediate reduction by the district in the amount the district determines was improperly delivered to lands outside the LVP service area, and the wholesale municipal customer will be required to pay the full cost of service from LVP facilities (including fixed and variable costs and recovery of capital investment) as well as the actual costs of administering this regulation, for the water which was improperly served outside the LVP service area. (Res. 00-01 Exh. A (part); Res. 97-36 Exh. A (part): Res. 95-7 Exh. A (part))

5.04.130 Encroachment onto district right-of-way.

The following charges shall be paid by those individuals encroaching onto the district's right-of-way:

A. An encroachment permit fee of ninety-five dollars with an annual renewal charge of fifty-five dollars. (Res. 95-7 Exh. A (part))

LETTER 3 RESPONSE

Contra Costa Water District
Dennis Pisila, Senior Planner
February 27, 2002

3-1 The sentence has been deleted and the text modified to reflect the cumulative demand.

CONTRA COSTA
WATER DISTRICT

1331 Concord Avenue
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MAR 5 2002
PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

Letter 4

March 4, 2002

Via Fax 925/252-4814

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Randy Jerome, Acting Director
Planning and Building Division
City of Pittsburg
65 Civic Drive, P.O. Box 1518
Pittsburg, California 94565

Subject: Comments on Bailey Road Estates Draft EIR

Dear Mr. Jerome:

Thank you for the opportunity to review and comment on the Draft EIR for the Bailey Road Estates project. The project is not within the current service area boundaries of the Contra Costa Water District (CCWD), nor is it within the CCWD sphere of influence (SOI) established by the Contra Costa Local Agency Formation Commission (LAFCO).

The project is the subdivision of 122 acres of a 265 acre site (Assessor Parcels 97-230-003 and -004) into 319 lots for the construction of single-family estate homes. The project is located on the west side of Bailey Road in the unincorporated county within the City of Pittsburg planning area, approximately two miles south of the Bailey Road intersection with State Highway 4. With the exception of the siting of a water tank, the northern portion of the site will remain in open space. The site is primarily in steep slopes (i.e., over 60% of the site contains lands sloping 30% or greater), and will require mass grading for the development of padded lots. Three drainage swales for the headwaters of Lawlor Creek are proposed to be filled, including an existing marsh and wet meadow adjacent to Bailey Road.

The two overriding CCWD issues or questions on this project are:

1. Will the project become eligible for a reliable Central Valley Project (CVP) water supply, and the benefits from the Los Vaqueros Project (LVP)?

2. Will the drainage impacts be addressed sufficiently to not cause downstream flooding, sedimentation, and pollution impacts on the Contra Costa Canal?

With reference to the first question, the document states that the project would increase demands on water supply (Impact 4.7-6), but assumes that CCWD will be able to make

4-1

a positive finding (i.e., as stated in District regulations) without providing factual evidence for such a finding (as requested in the CCWD NOP Response). It is also important that the Federal Endangered Species Act (ESA) be addressed fully in order for CCWD to obtain federal inclusion approval to allow the City of Pittsburg to serve Central Valley Project (CVP) water to the project. 4-1

The cause for drainage concerns is: (1) that downstream flooding problems are acknowledged in the vicinity of the canal (e.g., the box culvert at Ambrose Park has insufficient capacity), and (2) that the Draft EIR mitigation for a detention basin (Mitigation Measure 4.3-1A) "would do nothing to ensure that downstream facilities are not exceeded in 100-year flows" (DEIR, page 4.3-14). CCWD is concerned that flooding of the area surrounding the canal facilities not only risks contamination of the canal water with urban pollutants, but also threatens the structural integrity of the canal itself, as well as the future Multi-Purpose Pipeline, which is under construction in the canal right-of-way. It is important that the developer and the City evaluate all existing downstream drainage conveyance facilities that will handle project stormwater runoff. If these facilities are inadequate, the project developer should provide appropriate improvements prior to project development. 4-2

More detailed comments are provided in Attachment 1. If you have any questions on any of the CCWD comments, please contact Dennis Pisila at 925/688-8119.

Sincerely,

Jerry Brown
Director of Planning

JB/DP

Attachment 1: Specific comments on the Bailey Road Estates Project Draft EIR
2: Reclamation NEPA FONSI re CCWD Inclusions (October 23, 2000)
3: CCWD Regulation 5.04.120

cc: Cay Goude, Assistant Field Supervisor, U.S. Fish & Wildlife Service, Sacramento
Robert Edwards, Chief, Engineering, Operations and Maintenance, USBR Tracy
Annamaria Perrella, Executive Officer, Contra Costa LAFCO

ATTACHMENT 1

SPECIFIC COMMENTS ON THE BAILEY ROAD ESTATES DRAFT EIR

The following comments are provided in the general sequence that the particular item or issue appears in the Draft EIR following the Introduction (Summary). Recommended additional specific wording or replacement wording is shown in **bold**. Other elements or issues are recommended for additional explanation or changes in wording to be developed by the EIR preparer for the Final EIR. Any changes to the text material should also be reflected by the EIR preparer in appropriate changes in the Introduction.

Chapter 2: Project Description Table 2-1. In the required approvals for the project, it is stated that the CCWD Board of Directors will make a recommendation for annexation following project approval by the City of Pittsburg. This is not correct. CCWD typically comments on annexations at the City's initiation of the annexation application, and at LAFCO's public hearing on the reorganization. It is stated that LAFCO would approve the annexation "after receiving recommendation of annexation by Delta Diablo Sanitation District and Contra Costa Water District". This also is not correct. LAFCO normally does not request or encourage a recommendation from other agencies involved in a reorganization action. **4-3**

Chapter 3: Planning Policy Impact 3-2. The project will require annexation to the City of Pittsburg, Contra Costa Water District and Delta Diablo Sanitation District. According to the document, this is considered as a *less-than-significant* impact. However, the evaluation process necessary to make this determination is not stated. Please provide documentation to support the alleged *less-than-significant* impact including, but not limited to, how LAFCO and CCWD policies and requirements on water services to new or proposed annexation areas was addressed. **4-4**

Chapter 4: Drainage/Water Quality Impacts 4.3-1 and -2, pages 4.3-12 thru -17. Both increased rates and increased volumes of stormwater runoff could exceed flow capacities within downstream drainage facilities causing an increase in the extent or duration of flooding. It is also noted on page 4.3-14 that a detention basin or basins (as required in Mitigation Measure 4.3-1A) "would do nothing to ensure that downstream facilities are not exceeded in 100-year flows" [from General Plan Policy 3-S-15]. Because of the persistent flooding problems that now exist in Ambrose Park due to an undersized box culvert under the Contra Costa Canal, it is requested that the developer and the City evaluate all drainage conveyance facilities that will handle this increased runoff. It is noted that Mitigation Measure 4.3-2B requires the applicant to submit a geomorphic evaluation of downstream sections of Lawlor Creek; however, CCWD requests this be expanded to **include an evaluation of existing stormdrain improvements including the box culvert under the canal. The developer must improve existing facilities if shown to be deficient. A regular stormwater facility maintenance program must be instituted for all existing and improved downstream facilities.** As stated in CCWD's March 7, 2000 NOP Response, it is **4-5**

important that the appropriate mitigation be provided to eliminate or mitigate the identified impacts. 4-5

Chapter 4: Water Service, pages 4.7-6 thru -8. The description of CVP water service (first paragraph) mentions CCWD's CVP contract with the U.S. Bureau of Reclamation. However, it fails to identify the need for Reclamation's approval for inclusion of the site and project into the CVP contractual service area. Table 2-1, however, correctly identifies Reclamation's role in required project approvals. For clarification and completeness, it is recommended that the following language be added to the first paragraph under Water Service:

The project area will need to be approved by Reclamation as an inclusion to CCWD's contractual service area for the receipt of CVP water supplies. Reclamation will need to evaluate the inclusion application with respect to federal statutes and regulations, including the Endangered Species Act (ESA). Reclamation requires that the project proponent undertake ESA section 10 consultation directly with the U.S. Fish and Wildlife Service and obtain either a section 10 permit for each federally-listed species affected by the project, or other ESA letter of clearance covering all such species for the CCWD. CCWD will include this information in the inclusion application to Reclamation. Upon Reclamation's approval, CCWD will issue a Confirmation Letter to the City of Pittsburg to provide CVP water to the project. Attachment 2, a copy of Reclamation's NEPA (FONSI) clearance for pending and future inclusion applications inside the CCWD Planning Area (Future Water Supply Study Service Area C) is provided to document the Reclamation inclusion requirement (see process contained in October 23, 2000 cover letter to Mr. Buddy Smith at the Reclamation Field Office in Byron). 4-6

The second paragraph describes the CCWD *deminimis* finding required for water service applications that are outside the CCWD Planning Area and the Los Vaqueros Project (LVP) Planning Area. It should be added that the **CCWD Confirmation Letter will address the *deminimis* finding as required in CCWD's Annexation and Water Service Regulations.** A copy of CCWD's Regulation 5.04.120 is provided as Attachment 3 for clarification and incorporation into the above requested wording as necessary. While the *deminimis* finding definition is provided, there is no explanation for the reader why it is needed. It may be appropriate therefore to introduce this subject with a new sentence (i.e., a new third sentence) as follows: **In order to assure that: (1) CCWD's present and future customers within the CCWD planning area receive the intended Los Vaqueros Project benefits (i.e., high quality water with lower chlorides and water supply reliability) and (2) CCWD complies with all permit requirements related to the Project, it is necessary to limit the additions to the Los Vaqueros Project service area .** 4-7

On page 4.8-7, a City General Plan Water Service goal 11-P-5 is cited: "Work with CCWD in planning the development of new pressure zones as needed to ensure adequate fire flows in hillside areas." The relevance of CCWD's participation in planning the City's pressure zones (in hillside areas) is not understood. CCWD provides the raw water supply to the City, which in turn treats and distributes the water to the City customer base. 4-8

Chapter 4: Water Supply, Impact 4.7-6, page 4.7-14. The water supply impact is "the project would increase demands on water supply". The first sentence provides a project demand of 47,850 gallons per day (i.e., 53.6 acre feet per year). No quantitative information is provided in the next two sentences to relate the project demands to overall CCWD supplies and transmission capacities. While it is common to reference other documentation, such as the General Plan Draft EIR in this case, there should be a simple statement that could relate the project's incremental increased demand with the available and effective supply. 4-9

The third sentence, "Furthermore, consistent with CCWD guidelines, when currently-known cumulative projects outside of Service Area C are considered, the project will not result in a cumulative increase in demand greater than the 5 percent above the water demand specified in the CCWD 1996 Future Water Supply Service Study" is not correct, nor has a determination been made. Please remove this statement and refer to the recent letter to the EIR preparer (i.e., copy of February 27, 2002 letter to Mills Associates provided to you). Both CCWD and the land use agencies inside the CCWD service area can provide information on future annexations with known or potential projects outside Service Area C. 4-10

Chapter 4.8: Biological Resources, Mitigation Measure 4.8-1A, page 4.8-12. Table 4.8-1 and the discussions on pages 4.8-5 and -8 confirm the presence of three federally-listed species on the project site: the California Tiger Salamander, California Red-Legged Frog and the Burrowing Owl. This is further reflected in Impact 4.8-1. Other federal species of concern could also be affected by the project, including the Loggerhead Shrike and the California Horned Lark, and possibly the Peregrine Falcon (i.e., which is an Endangered Species).

The Biological Resources section page 4.8-11 discussion indicates that consultation (i.e., negotiations) is underway with the California Department of Fish and Game (DFG) regarding mitigation for project impacts on the California Tiger Salamander. Future consultation is acknowledged with the U.S. Fish and Wildlife Service on the California Red-Legged Frog (in connection with the wetland permitting process only) and the San Joaquin Kit Fox, which is listed in Table 4.8-1 as an "unlikely" resident at the project site. Also, pre-construction surveys will be required to prevent any "take" of burrowing owls, horned larks or loggerhead shrikes, and to confirm absence of any occupied San Joaquin kit fox dens. 4-11

Neither the discussion nor mitigation measures indicate the relationship of federal endangered species with the inclusion process. This is a significant omission since the emphasis is on wetland habitat preservation or replacement, and consultation only with DFG in order to obtain wetland permits. While the surveys are to be conducted by qualified biologists using presumably established protocols, there is no indication that section 10 consultation is prescribed with the Service to obtain either a section 10 take permit, or otherwise gain Service clearance for federally-listed species for the entire site. See the comments for Water Service pages 4.7-6 thru -8, above, regarding the inclusion process. Inclusion approval by the Service applies to all federally-listed species. Please revise Mitigation Measure 4.8-1A, or add a new mitigation measure, that clearly requires the

applicant to undertake ESA section 10 consultation with the Service (see also Attachment 2, inclusion application process), including the submission of relevant kit fox, burrowing owl and bird nesting surveys, and to obtain a section 10 permit, or other written clearance, for each federally-listed species, and submit them to CCWD for coordination in the inclusion application to Reclamation. This procedure should ensure that Reclamation approves the inclusion for a CVP water supply, as shown in the Table 2-1 Required Approvals (note: the final action is CCWD's issuance of a Confirmation Letter, which would also address the *deminimis* finding required in CCWD Regulation 5.04.120).

4-11

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
1243 N Street
Fresno, California 93721-1813

IN REPLY REFER TO:

OCT 23 2000

SCC-412
ENV-6.00/WTR-4.00/LND-10.00

Mr. Dennis Pisila
Contra Costa Water District
PO Box H2O
Concord, California 94524-2099

Subject: Pending Inclusion Requests

Dear Mr. Pisila:

Enclosed is a copy of the Finding Of No Significant Impact (FONSI) for all Contra Costa Water District (CCWD) inclusions within the planning area of the Multi-Purpose Pipeline (which was incorporated by reference in the FONSI) (map also enclosed) for your records. This document fulfills NEPA requirements however mitigation measures related to Contra Costa Water District inclusions prescribed in the Biological Opinion for the Multi-Purpose Pipeline must still be complied with. These mitigation measures require that inclusion applicants do one of the following:

1) complete a section 7 consultation with either Reclamation or another federal agency.

2) obtain a section 10 (a)(1)(B) permit from the Fish and Wildlife Service (USFWS) or,

3) fall within the jurisdiction of a regional HCP.

As per the process for Reclamation's consideration of inclusion proposals, the applicant must provide evidence of compliance with the ESA requirement prior to completion of the inclusion. The ESA compliance evidence is still needed from the following pending inclusion requests:

1) Southwest Hills

   a) San Marcos project

   b) Alves Ranch

2) Cypress Lakes and Golf Course

3) Oak Hills South Unit # 5

Upon receipt of the appropriate ESA evidence from the applicant, Reclamation will complete the evaluation of the inclusion request. Please send the evidence once received to Buddy Smith, Supervisory Repayment Specialist, at the Tracy office; RR1, Box 35,Byron, California 94514-9614.

If you have any questions, please feel free to contact me at (559)487-5179 or (559)487-5933 for the hearing impaired.

Sincerely,

Judi Tapia

Judi Tapia
Environmental Specialist
South-Central California Area Office

Enclosure

cc: Frances Garland
Contra Costa Water District
PO Box H20
Concord, California 94524-2099

Buddy Smith
Bureau of Reclamation
RR1, Box 35
Byron California 94514-9614

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
1243 N Street
Fresno, California 93721-1813

IN REPLY REFER TO:

SCC-412
ENV-6.00/WTR-4.00

Mr. Buddy Smith
Bureau of Reclamation
RR1, Box 35
Byron, California 94514-9614

Subject: Transmittal of Finding Of No Significant Impact (FONSI) Regarding Contra Costa Water District (CCWD) Inclusions

Dear Mr. Smith:

Enclosed is the (FONSI) for all (CCWD) inclusions within the planning area of the Multi-Purpose Pipeline (which was incorporated by reference in the FONSI) (map also enclosed). This document fulfills NEPA requirements however mitigation measures related to CCWD inclusions prescribed in the Biological Opinion for the Multi-Purpose Pipeline must still be complied with. These mitigation measures require that inclusion applicants do one of the following:

1) complete a section 7 consultation with either Reclamation or another federal agency.

2) obtain a section 10 (a)(1)(B) permit from the Fish and Wildlife Service (USFWS) or,

3) fall within the jurisdiction of a regional HCP.

CCWD has proposed the following process for Reclamation's consideration of inclusion proposals:

- applicant requests inclusion from CCWD;
- CCWD informs the applicant of need to consult with USFWS;
- CCWD forwards request with evidence of ESA compliance to Reclamation;
- Reclamation approves based on the determinations in the attached FONSI and applicant provided evidence of ESA compliance.

Prior to the approval of any of the pending inclusions as per the proposed process, CCWD will need to provide evidence of ESA compliance for each of the proposed inclusions.

If you have any questions, please feel free to contact me at (559)487-5179 or (559)487-5933 for the hearing impaired.

Sincerely,

Judi Tapia
Environmental Specialist
South-Central California Area Office

Enclosure

cc: Frances Garland and Dennis Pisila
Contra Costa Water District
PO Box H2O
Concord, California 94524-2099

FINDING OF NO SIGNIFICANT IMPACT

"Inclusion of Land by Contra Costa Water District into the Contra Costa Water District Planning Area"

Recommended: Acting Chief, Resource Management Division — Date 10/17/00

Concur: Environmental Officer, South-Central California Area Office — Date 10/17/00

Approved: for Area Manager, South-Central California Area Office — Date 10/20/2000

FONSI No. 0097-

FONSI No. 0097

FINDING OF NO SIGNIFICANT IMPACT

"Inclusion of Land by Contra Costa Water District into the Contra Costa Water District Planning Area"

In accordance with Section 102 (2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the Area Manager of the South-Central California Area Office, U.S. Bureau of Reclamation (Reclamation), determines that an environmental impact statement is not required for "*Inclusion of Land by Contra Costa Water District into the Contra Costa Water District Planning Area.*" An Environmental Impact Statement/Environmental Impact Report, prepared jointly pursuant to the California Environmental Quality Act, and the National Environmental Policy Acts, are on file at the South-Central California Area Office, Bureau of Reclamation, 1243 'N' Street, Fresno, California 92721-1813, Phone (559 487-5116). Questions about this FONSI may be directed to Judi Tapia, Environmental Specialist, Phone (559) 487-5179.

Reclamation independently reviewed these documents and determined that the proposed action is neither precedent setting, controversial, nor an action usually requiring an Environmental Impact Statement. Based on the analyses and conclusions of Multi-Purpose Pipeline EIS/EIR (MPP), and the Future Water Supply Implementation Plan EIR (FWSI) and in accordance with 40 CFR 1506.3 (516 DM 3.6), Reclamation is adopting the MPP and FWSI. Therefore, the preparation of separate NEPA documentation is not required and Reclamation is issuing this Finding of No Significant Impact (FONSI).

Five inclusion applications to Contra Costa Water District (CCWD) are currently being considered by Reclamation. These are Southwest Hills (987 acres);; Cypress Lakes and Country Club (693 acres); Oak Hills South Unit # 5 (46 acres), Avila Road (13 acres) and Higgins Ranch (514 acres). The acreage for Southwest Hills has been reduced from the original application in 1990 (998 acres) due to land dedications for highways and conservation. The Southwest Hills, Cypress Lakes and Country Club and Oak Hills South Unit #5 inclusion applications represent local agency approved or proposed projects. Within Southwest Hills application is the San Marcos project (621 acres, as revised by dedications) and the proposed Alves Ranch project (293 acres). No specific projects have been proposed for Avila Rad and Higgins Ranch inclusion applications; although the latter is contained in a City of Antioch Specific Plan area.

It was previously determined that district-wide (CCWD) environmental documentation would be necessary prior to final decision to approve or disapprove any or all of these inclusions. After reviewing the Multi-Purpose Pipeline EIS/EIR (MPP), and the Future Water Supply Implementation Plan EIR (FWSI) already completed by Contra Costa Water District, it is now determined adequate district-wide environmental analysis, including growth impacts analysis, has been completed for inclusions proposed within the previously analyzed area called the

planning area (PA)(see attached map). The PA includes all of the above potential inclusions and 1,200 additional acres that may be included in the future but for which no request has been made for inclusion at this time. Within the PA, 7,000 acres are dedicated to open space, already developed or are outside the urban limit line and therefore is unlikely to be developed or served with CVP water. The PA is the area analyzed in the FWSI and the MPP and therefore for which the impacts of growth have already been analyzed.

The environmental consequences of the Federal action of inclusion (or allowing CVP water to be delivered to new areas) are all related to the direct or indirect impacts of growth. Environmental documents which have already fully analyzed the district wide impacts of growth have also disclosed the environmental impacts of inclusion and therefore no new environmental documentation will be needed for inclusion in the CCWD PA.

The Federal impacts for inclusions are determined on the district wide level since Reclamation delivers water to CCWD who then determines distribution. Therefore the significance of impacts based on inclusions is similarly examined from a district wide perspective analyzing the effect of all potential inclusions simultaneously, thus avoiding segmenting/piecemealing and utilizing the entire district as a footprint.

Background

Future Water Supply Implementation Program

The FWSI program provides a plan for meeting the expected water supply needs for CCWD's customers through 2040. The program assumed that all the land included in the CCWD PA would have been developed according to the appropriate city's general plan and the CVP water would have been delivered to the entire area - both that which is already part of the Water District and that which may potentially be included.

Future Water Supply Implementation EIR

The FWSI EIR programmatically evaluated the direct impacts to the Delta and secondary or indirect impacts associated with growth within the County as a result of the availability of additional water supplies. CCWD's water demand estimates were based on needs previously planned for by local and regional planning agencies. The FWSI proposed three actions to provide drought reliability and operational flexibility: renegotiating the CVP Amendatory Contract (175r-3401); implementing an expanded District-wide conservation program; and completion of two or more water transfers. The FWSI responded to mitigation measures outlined in the Contra Costa County General Plan EIR, including directives to develop supplies and facilities to meet future water needs based on the growth policies contained in the County and cities' General Plans (Policy 7 - 17 of the Contra Costa County General Plan.) The EIR found that the implementation of the FWSI would not directly cause growth to occur, but would accommodate the growth already planned for in city General Plans and the Contra Costa County General Plan. The FWSI EIR incorporated the Contra Costa County General Plan EIR impact analysis and mitigation measures where appropriate. It expanded the evaluation of terrestrial

resources, and found that County mitigation and policies governing the permitting of property, in addition to state and Federal protections would be sufficient to reduce the level of impacts to less than significant.

The FWSI study recommended developing future water supplies to meet projected demands of 219,400 afy by the year 2040 through a combination of phased components. The FWSI EIR evaluated the broad environmental effects associated with providing additional water supplies to meet the demands of growth and diverting additional water from the Delta through the implementation of water transfers. The areas of environmental concern addressed in the EIR included: socioeconomic resources, land use, planning and agriculture, Delta hydrodynamics, Delta water quality, aquatic resources, terrestrial resources, public services and utilities, traffic, air quality, noise, cultural resources, aesthetics, and recreation. Potential impacts were related to the ability of the project to accommodate growth, or remove an impediment to growth. Projected growth was consistent with the County and cities' expectation of achieving build out.

The FWSI was developed in response to Mitigation 4.5-5(e) of the CCCGP EIR that encouraged water service agencies, "to develop supplies and facilities to meet future water needs based on the growth policies contained in the County and cities' General Plan." The FWSI EIR validated the growth projections of the FWSI, confirmed that the growth projections were within the growth projections of the FWSI, confirmed that the growth projections were within the growth policies defined in the CCCGP and incorporated by reference the impacts and associated mitigation measures of build out as defined in the CCCGP EIR. Potential significant and mitigable impacts resulting from projected build out were identified for socioeconomic, land use, planning and agriculture, terrestrial resources, public services and utilities, traffic, air quality, noise, and cultural resources. Although, the CCCGP EIR identified impacts to natural open spaces as a significant and unavoidable, approximately 40,000 acres of open space have been added to the County inventory since certification of that document. Acquisition of additional acreage was the result of voter-approved Bond Measure AA, and CCWD's construction of the Los Vaqueros Reservoir and purchase of its watershed lands.

Multi-Purpose Pipeline EIR/EIS

The MPP EIR/EIS evaluated the direct and indirect impacts of construction of a water transport pipeline to increase reliability of the CVP system and allow for increased demand. The selected alignment would parallel the Contra Costa Canal. The EIR/EIS found that most project impacts would result from construction activities and would be temporary and less than significant with mitigation. Construction and operation of the MPP project would not result in any direct, significant, unavoidable impacts. The EIR/EIS further concluded that implementation of the MPP project would support additional growth within the communities served by the District in accordance with the approved local land use [illegible]. The MPP project would not support growth beyond planned levels or in areas not planned for development by the appropriate land use agencies. This planned growth has significant impacts, some of which are significant unavoidable, as described in the EIRs on the relevant General Plans. Because implementation of the MPP project would support planned growth, it could have indirect, secondary effects of growth that are significant and avoidable.

The MPP project would increase the capacity and reliability of the District's raw water delivery system in response to the Contra Costa County General Plan EIR Mitigation Measure 4.5-5(e) that encourages water service agencies "to develop supplies and facilities to meet future water needs based on the growth policies contained in the County and cities' General Plan." The Contra Costa Canal does not have adequate conveyance capacity to deliver water to meet existing plus projected future water supply demands within the District's service area. The MPP project included construction and operation of two new subsurface pipelines and pump stations, along with other improvements to the existing Contra Costa Canal. The key issues evaluated in the EIR/EIS include water demand/capacity, secondary effects of growth, cumulative effects, hazardous contamination, traffic, encroachment, air quality, noise, parks and recreation, environmental justice, biology, hydrology, and water quality. The Canal Alignment was identified as the preferred project for this EIR/EIS. Potentially significant construction related impacts were identified for land use, recreation, transportation, air quality, surface water resources, groundwater resources, geology, seismicity and soils, vegetation and wildlife, cultural resources, hazardous materials, and public services and utilities. Identified mitigation measures reduced all these impacts to less-than-significant levels.

Some indirect impacts of growth, projected by the County General Plan, were found to be significant and unavoidable consistent with the CCCGP EIR. Mitigation measures were identified to limit the growth inducement potential of CCWD's authority - namely provision of adequate water supply. CCWD does not have land use regulatory authority. The MPP EIR/EIS fully incorporated data and mitigation measures from the FWSI EIR related to potential effects of increased growth pressure, effects on native habitats and agricultural lands, and effects on water service.

MPP and FWSI Projects Biological Opinion

The biological opinion issued by USFWS responded to Reclamation's April 28, 1999 request for formal consultation with the USFWS on the MPP and FWSI projects. The biological opinion represents USFWS biological opinion on the effects to the species listed in Tables 1, 2, and 3 from the CCWD's MPP project, FWSI program and related project, in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act). It also sets forth the process for addressing the indirect effects on terrestrial species related to the renewal of CCWD's Central Valley Project (CVP) contract as provided under the consultation on the implementation of the CVP Improvement Act and Operation of the CVP (1-1-98-F-0124). The proposed action considered in the biological opinion was the construction, maintenance and operation of a multi-purpose pipeline and continued delivery of water based on current operating parameters. It also included an analysis of effects of the secondary urban growth and development resulting from 219,400 af/yr from a combination of CVP water delivery, additional surface water rights, transferred surface water, groundwater sources and water conservation.

The biological opinion reviewed the effects of construction of the MPP on listed and proposed species, and the direct and cumulative effects of future water diversions on listed fish species in

that five species were not likely to be jeopardized by the effects of construction of the MPP: longhorn fairy shrimp, vernal pool tadpole shrimp, vernal pool fairy shrimp, California red-legged frog, and Contra Costa goldfields. It also concluded that the proposed water diversions would not likely jeopardize the continued existence of delta smelt and splittail, or result in the destruction or adverse modification of critical habitat for delta smelt. USFWS further concluded that twelve plant and wildlife species would not likely be jeopardized by the indirect effects of urban development associated with FWSI program: longhorn fairy shrimp, vernal pool tadpole shrimp, vernal pool fairy shrimp, California red legged frog, giant garter snake, Alameda whipsnake, California clapper rail, California least turn, salt marsh harvest mouse, San Joaquin kit fox, Contra Costa goldfields, and soft bird's-beak.

These conclusions were based on the following assumptions: 1) CCWD and Reclamation remain in compliance with the terms and conditions of the Biological Opinions for the Los Vaqueros Project; 2) CCWD operates the Los Vaqueros Project according to the agreed upon Los Vaqueros Operating Rules; and 3) CCWD's Conservation Measures for the protection of listed species and their habitats in the action area are implemented. Full implementation of CCWD's proposed Conservation Measures was identified as key to the conclusion that survival and recovery of the listed species in the action area would not be reduced appreciably by continued delivery of CVP water to CCWD, or by the direct and indirect effects attributable to these deliveries. These Conservation Measures, as described in the Biological Opinion, include:

Habitat Conservation Planning. CCWD will participate in a Habitat Conservation Plan for east Contra Costa County. The purpose of the Habitat Conservation Plan will be to offset the effects of urban development on listed and proposed plant and wildlife species in the east Contra Costa County. CCWD will contribute up to $300,000 to fund development of a Habitat Conservation Plan for est Contra Costa County and agrees to limit its water delivery to 148,000 afy in the interim until the Habitat Conservation Plan is completed.

Incremental Water Purchases. CCWD provides the necessary water supplies to accommodate urban development and will continue to do so. In order to contain growth to that which is already planned and permitted by local land use agencies with land use authority, CCWD will purchase water incrementally. CCWD will also establish a monitoring process to track the impact of new development on water demand projections and available projected water supplies.

Contra Costa Water District Code Enforcement. Under CCWD's Code of Regulations Section 5.04.120, proponents for an annexation or applications for water service to newly annexed lands are required to provide all necessary environmental documentation and approvals by the appropriate regulatory agencies, including the Service, before CVP water can be provided. CCWD will continue to enforce section 5.04.120, and will keep USFWS informed of enforcement actions related to endangered species.

Analysis:

The Bureau of Reclamation has taken the following facts into consideration in concluding that adequate environmental analysis has already been completed:

1) NEPA does not require re analysis of the environmental effects of actions for an action that has already been covered by previous Federal environmental analyses which meets the requirements of NEPA. In this case the action is delivery of CVP water to the included areas within the planning area and subsequently the growth in those areas.

2) The MPP EIS/EIR fully analyzes water delivery and growth related impacts in the CCWD planning area. FWSI EIR data related to growth and water delivery was fully duplicated within the MPP EIS/EIR and therefore has been analyzed in a Federal level environmental document.

Conclusion:

Therefore, for the entire CCWD PA adequate environmental documentation has occurred for all inclusions. Please fell free to process current and future CCWD applications for inclusion within the PA with the knowledge that appropriate environmental documentation has been completed for these inclusions. There is a stipulation in the Biological Opinion however that will require the inclusion applicant to do of the following:

1) complete a section 7 consultation with either Reclamation or another federal agency
2) obtain a section 10 (a) (1) (B) permit from the Service or,
3) fall within the jurisdiction of a regional HCP.

CCWD has proposed the following process for Reclamation's consideration of inclusion proposals:

- applicant requests inclusion from CCWD;
- CCWD informs the applicant of need to consult with USFWS;
- CCWD forwards request with evidence of ESA compliance to Reclamation;
-Reclamation approves based on the determinations in this letter and applicant provided evidence of ESA compliance.

CCWD is assisting in the HCP development process for this area and therefore the ESA issues maybe resolved by the HCP in the near future. Please let me know if you are comfortable with the proposed process.

TOTAL P.03

5.04.110 Unauthorized use of water.

Anyone using water without having made application to the district for water service shall be held liable for the service from the date of any previous meter reading that most nearly coincides with the actual date the service was first used by such customer. (Res. 90-84 Exh. A (part))

5.04.120 Annexation of land to the district and provision of water service to annexed lands.

The annexation of lands to the district is governed by the provisions of the Cortese/Knox Local Government Reorganization Act of 1985 (California Government Code Section 56000 et seq., cited in this section as the "Act"). This regulation supplements the provisions of the Act. In the event of any conflict between the provisions of the Act and this regulation, the former shall control.

The provision of water service to annexed land is governed by the regulations codified in this section. Subsection A contains the processes for annexation of lands to the district. Subsection B contains the processes for obtaining water service for annexed lands from either the district or from one of its wholesale municipal customers and applies to lands that are inside or outside either the district Central Valley Project (CVP) service area or the Los Vaqueros Project (LVP) service area. The regulation applies to requests for annexation to or detachments from CCWD, or annexation to CCWD as part of a reorganization, whether through requests directly to the district or by application to the Local Agency Formation Commission (LAFCO). The regulation also provides fees to offset the costs associated with administering these requirements.

Under the terms of the district's contract with the U.S. Bureau of Reclamation (Bureau) for CVP water, the Secretary of the Interior or the Secretary's duly authorized representative (Secretary) must formally consent to inclusion of newly annexed lands into the district before such lands can receive CVP water. The "CVP service area" refers to all those lands within the district that have received such consent.

The district's LVP is a water quality and reliability project. Water from LVP facilities is approved for use in a defined area as set forth in the permits and environmental documentation for the project. That area is referred to in this section as the "LVP service area" and includes the planning area for the LVP as defined in the Los Vaqueros Project Final Environmental Impact Report/Environmental Impact Statement (Draft Stage 2 EIR/EIS for the Los Vaqueros Project, February 1992, pp. 1-6—1-7) and any lands to which the district's board of directors has consented to service from LVP facilities. The district must approve the addition of any lands to the LVP service area before such lands can receive service from LVP facilities in order to ensure that such service is consistent with the permits, environmental documentation, objectives and planning for the LVP.

A. Annexation of Lands to the District.

1. The district will initiate proceedings (including annexations, detachments and reorganization) if: (a) evidence satisfactory to the district is presented that all, or a substantial portion, of the resident voters or property owners of the affected lands desire the action, (b) a map and legal description of the affected lands are submitted to the district, (c) the proponents of the proceedings pay the fees provided, and (d) the proponents agree to comply with the provisions of this regulation related to annexation of lands which are not within the district's CVP service area and/or not within the LVP service area. The initiation of proceedings by the board shall not restrict or impair the powers of the board in subsequent proceedings for annexation of the lands or any part thereof.

2. The fee for annexation of lands shall be a flat amount of eight hundred dollars for annexations that are not subject to the CVP inclusion process and one thousand two hundred dollars for annexations that are subject to the CVP inclusion process. This district fee is separate from any other fees which may be required by other agencies, including Bureau fees for processing an inclusion request. In addition, the district will be reimbursed for any direct costs e.g., legal description verification, attorney review costs, document reproduction costs, public notices, etc. Payment will be requested upon the proponent's formal applica-

tion to LAFCO or the district, and shall be made within thirty calendar days. The appropriate fee applies to proponents requesting annexation to or detachments from CCWD, or annexation to CCWD as part of a reorganization, whether through requests directly to the district or by application to the LAFCO.

B. Provision of Water Service to Annexed Lands.

1. No water shall be provided by the district to annexed lands unless and until a water supply is available for use on such lands, as confirmed in writing by the district. No water furnished by the CVP shall be provided by the district or any of its wholesale municipal customers for use on lands which are not in the district's CVP service area unless and until the Secretary gives written consent to the inclusion of such land in the district's CVP service area. A confirmation letter will be issued by the district for water service based upon a CVP water supply under the provisions of either subsection B1a or B1b set forth below; a confirmation letter for water service based on a non-CVP supply will be issued by the district under the provisions of subsection B1c set forth below.

a. At the time annexation is sought for the purpose of receiving treated water from the district, or an application is made for treated water service for lands previously annexed to the district, the district will notify the proponent of the annexation or the applicant for water service that the written consent of the Secretary is required before CVP water can be made available for use on the subject land. It shall be the responsibility of the proponent of the annexation or the applicant for water service to develop and provide the necessary environmental or other documentation necessary for such written consent. The district will pursue timely and prompt written consent decisions based on this documentation. The district will promptly issue the confirmation letter for treated water service utilizing CVP water after such consent has been received. No meter will be issued by the district for treated water service until a confirmation letter has been issued.

b. At the time annexation (or annexation to CCWD as part of a reorganization) is sought for the purpose of receiving water service from one of the district's wholesale municipal customers, or an application is made to such a customer for water service for lands already annexed to the district, the wholesale municipal customer shall notify the district of the request. The district will notify the proponent of the annexation or the applicant for service and the wholesale municipal customer that written consent of the Secretary is required before CVP water can be made available for use on the subject land. It shall be the responsibility of the proponent of the annexation or the applicant for water service or the wholesale municipal customer to develop and provide the necessary environmental or other documentation necessary for such written consent. The district will pursue timely and prompt written consent decisions based on this documentation. The district will promptly issue a confirmation letter to the wholesale municipal customer authorizing water service utilizing CVP water purchased from the district after such written consent has been received.

c. If the district determines that a non-CVP water supply has been identified and is available or can be made available by the district in a timely manner to provide the water service requested, the district will issue a confirmation letter to the proponent of the annexation or the applicant for water service, and if necessary the wholesale municipal customer, describing the water supply available and any conditions and/or restrictions that might apply to its use on the subject land. Provision and delivery of such water shall be made subject to the conditions and/or restrictions that apply to use of such water supply.

2. Water service from LVP facilities will not be provided to lands outside the LVP service area by the district or its wholesale municipal customers. This subsection describes the process by which the LVP service area can be adjusted by the district, and applies both to lands outside the LVP service area for which annexation to the district (either directly or through reorganization) is sought, and to lands previously annexed to the district which are outside the LVP service area and for which an application for water service is made to the district or to one of its wholesale municipal customers (which shall immediately inform the district when any such application is received). The district shall inform the annexation proponent, water service applicant and wholesale

municipal customer that the district will not provide service from LVP facilities unless the district determines that:

a. The requested wholesale or retail service can only be provided from district facilities which cannot feasibly be separated from LVP facilities;

b. The impact of the requested wholesale or retail water service on the LVP is de minimis; and

c. All necessary environmental documentation for the expansion of the LVP service area to include the land proposed for annexation to the district has been provided by the proponent of the annexation or the applicant for water service and approved by the appropriate regulatory agency.

A determination of de minimis will be made if the cumulative increase in demand from the subject annexation and all other past and pending annexations is less than five percent of the demands presented in the LVP EIR/EIS (Draft Stage 2 EIR/EIS for the Los Vaqueros Project, February 1992, as summarized in Attachment A). The district's determinations pursuant to this section will be transmitted in a confirmation letter to the applicant for water service or the proponent of the annexation and, if necessary, the wholesale municipal customer. If the district determines that a wholesale municipal customer is using LVP facilities to provide water service to lands outside the LVP service area prior to the district's determination to adjust the LVP service area, it will direct the wholesale municipal customer to immediately cease this unauthorized use of district facilities. The water supply available to the wholesale municipal customer will be subject to immediate reduction by the district in the amount the district determines was improperly delivered to lands outside the LVP service area, and the wholesale municipal customer will be required to pay the full cost of service from LVP facilities (including fixed and variable costs and recovery of capital investment) as well as the actual costs of administering this regulation, for the water which was improperly served outside the LVP service area. (Res. 00-01 Exh. A (part); Res. 97-36 Exh. A (part): Res. 95-7 Exh. A (part))

5.04.130 Encroachment onto district right-of-way.

The following charges shall be paid by those individuals encroaching onto the district's right-of-way:

A. An encroachment permit fee of ninety-five dollars with an annual renewal charge of fifty-five dollars. (Res. 95-7 Exh. A (part))

Table 1-1. Projected Average Annual Buildout
Contra Costa Canal Demands in Acre-Feet

	Critical Years	Noncritical Years
Antioch	26,100	23,300
Martinez[a]	5,600	5,600
Pittsburg[b]	13,600	13,600
Oakley Water District[c]	11,300	11,300
CCWD (TWSA)[d]	72,700	68,700
Rural[e]	4,300	4,300
Minor uses[f]	4,200	4,200
Subtotal	137,800	131,000
Industry[g]	47,400	41,000
Subtotal	185,200	172,000
Water losses[h]	20,600	20,000
Subtotal	205,800	192,000
Conservation[i]	(8,200)	(7,800)
Reclaimed water	(9,600)	(9,600)
Total canal demands[j]	188,000	174,600

[a] Demands for City of Martinez service area. Demands in Martinez for areas receiving treated water from CCWD are included in treated water service area (TWSA) demands.

[b] Demands do not include West Pittsburg. West Pittsburg demands are included in CCWD TWSA demands (James M. Montgomery, Consulting Engineers 1987).

[c] Consists of demands within the Oakley Water District and its planning area.

[d] Projected demands from the TWSA master plan were reduced 1,600 af/yr because of the anticipated change in the treated water supplier for lands southwest of the City of Pittsburg.

[e] Estimated demands for areas within CCWD's existing SOI and service area that are outside other municipal suppliers' planning area boundaries.

[f] Minor uses are the existing canal sales for minor municipal and industrial users, flat rate, and agricultural users. It is assumed these demands will not increase.

LETTER
4
RESPONSE

Contra Costa Water District
Jerry Brown, Director of Planning
March 4, 2002

4-1 The basis of the statement referenced by the commentor refers to information taken from the City's General Plan Update EIR and in personal communication with District staff. As further stated in the paragraph, the EIR acknowledges that the District must comply with the Biological Opinion issued to CCWD by the U.S. Fish and Wildlife Service regarding the taking of water and its effect on endangered species.

4-2 The Original Draft EIR stated on page 4.3-14 that the project's detention basin "would do nothing to ensure that downstream facilities are not exceeded in 100-year flows" because the lack of conveyance capacity at Ambrose Park and under SR 4 is an existing condition the applicant is under no obligation to correct. An on-site detention basin would be provided to prevent a project-related increase in peak storm water discharges and mitigate the downstream drainage impacts of development, in accordance with Policy 10-P-24 of the General Plan.

It is recognized that project development would also increase the total *volume* of runoff, and that the detention basin would not significantly prevent this increase from contributing to back-ups at SR 4 (unless these existing back-ups dissipate before the basin drains down completely, in which case, the basin would also mitigate the project-related increase in runoff volume). However, the project's preliminary drainage calculations indicate that total runoff from the 395 acres that include the site and the undeveloped upstream watershed would only increase by 4.75 percent during a 10-year storm and by 2.75 percent during a 100-year storm. Since this 395 acres represents approximately 55 percent of the total watershed located upstream of SR 4, total runoff at the highway would only increase by 2.6 percent during a 10-year storm and by 1.5 percent during a 100-year storm. The calculations were based on storm durations of 12 hours and 3 hours, respectively. Increases of this magnitude would only be considered significant if they were part of a *cumulative* increase expected to cause major changes in downstream flooding conditions. There appears to be little potential for continued development within the Lawlor Creek watershed, though, so no cumulative impacts beyond those described for the proposed project are anticipated. The Smith property, located directly north of the project site, is zoned open space.

As pointed out in the Draft EIR, neither the City nor Contra Costa County Water Conservation and Flood Control District (CCCWCFCD) have developed a drainage plan for the Lawlor Creek basin, so no long-term improvements (such as new culverts under Ambrose Park and SR 4) have been identified and no fee structure has been established to which the project could contribute (in accordance with General Plan Policy 10-P-23). Given the very small changes in existing flooding conditions expected to result from project development (as described in the previous paragraph), it is expected the cost of the drainage study alone could exceed the project's "appropriate ... share of the cumulative effect" (GP Policy 10-P-18), so it is not clear how the drainage improvements already needed under existing conditions could ever be funded through the collection of development fees, since little or no cumulative development is expected that would share the cost of either the study or the construction of improvements. As a result, if the City and Contra Costa Water District (CCWD) wish to correct the existing flooding problems at the park and Highway 4, immediately upstream of the CCWD canal, it appears another source of funding would have to be found to pay for both the study and the associated improvements. Once the study is complete, then the project could be assessed its fair share of the total improvement cost, based on its proportionate contribution to a *worsening* of existing flooding conditions (as opposed to its contribution to total runoff within the watershed).

4-3 Table 2-1 has been changed to reflect the CCWD annexation process.

4-4 Based upon information contained in the City's General Plan Update EIR, in which the project site was considered, and information provided by CCWD staff during preparation of this EIR, CCWD would be able to provide the necessary additional water for the project during non-drought years. Therefore, it was determined that annexation to the Water District was considered a less-than-significant impact. We would concur that the EIR was negligent in not providing a discussion following the impact statement.

4-5 Refer to response to comment 4-2.

4-6 Pages 4.7-6 and 4.7-7 have been revised to reflect the changes suggested by CCWD.

4-7 Refer to response to comment 4-6.

4-8 Comment noted. This policy is taken directly from the City's General Plan. The applicant will work with the City in determining pressure zones for adequate fire flows.

4-9 Page 4.7-18 of this Revised Draft EIR has been modified to include a discussion of the project's incremental demand on the CCWD water supply.

4-10 The statement has been deleted as suggested by the commentor and page 4.7-18 of the text modified.

4-11 The applicant is responsible for completing the consultation and permitting process under the state and federal Endangered Species Acts. Mitigation Measure 4.8-1A on page 4.8-12 of the Draft EIR acknowledges the need for securing all permits required by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA). Evidence that the applicant has complied with the requirements of these agencies must be submitted to the City prior to the issuance of any grading or building permits for the project, which should avoid the potential take of listed species. It is uncertain whether a Section 10 or Section 7 consultation would be required by the USFWS, which is dependent on whether any other federal permits would be necessary for the project. This will be resolved by the Federal permitting agencies and not by the EIR author or the water district. It should be noted that the permitting process is separate from the CEQA review. Due to the anticipated impacts on wetlands and waters, the project would most likely require a Section 404 permit from the Corps, in which case a Section 7 consultation would be required with the USFWS, not a Section 10 consultation as suggested by the commentor.

EAST BAY
MUNICIPAL UTILITY DISTRICT

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PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

February 19, 2002

Letter 5

Mr. Randy Jerome, Planning and Building Director
Pittsburg City Hall, City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Jerome:

Re: Notice of Availability of a Draft Environmental Report for Bailey Road Estates - City of Pittsburg

East Bay Municipal Utility District (District) appreciates this opportunity to review and comment on the proposed Notice of Availability of a Draft Environmental Report for Bailey Road Estates for the City of Pittsburg. The District does not have any comments at this time as the subject project has no impacts to the District's water supply. **5-1**

If you have any further questions or comments concerning this response, please contact Marie A. Valmores, Senior Civil Engineer, at (510) 287-1084.

Sincerely,

MARIE A. VALMORES
Senior Civil Engineer of Water Distribution Planning

MAV:RC:sb
sb02_066.doc

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LETTER 5 RESPONSE

East Bay Municipal Utility District
Marie A. Valmores
Senior Civil Engineer of Water Distribution Planning
February 19, 2002

5-1 The District had no comments on the Draft EIR.

EAST BAY REGIONAL PARKS PARK DISTRICT

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CITY OF PITTSBURG

Letter 6

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Ward 3
Jean Siri
Ward 1

Pat O'Brien
General Manager

February 25, 2002

Mr. Randy Jerome
Building and Planning Director
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

RE: Bailey Road Estates, Draft EIR

Dear Mr. Jerome:

Thank you for providing the East Bay Regional Park District with a copy of the Draft EIR for the Bailey Road Estates Project.

The District is one of three agencies, along with the City of Concord and Contra Costa County, currently working with the US Navy to conclude a Community Joint Use Plan for the Concord Naval Weapons Station (base), located adjacent to and southwest of the subject project. The Distirct's role in this plan would be to manage public access trails, open space and natural resources on the base. It is anticipated that at least one trail would be aligned close to the ridgeline along the eastern edge of the base.

The more than 5,000 acres of open space in the inland area of the Concord Naval Weapons Station will be a significant environmental amenity benefitting current and future residents of Pittsburg. This environmental amenity could also be substantially enhanced if it were linked to a trail system in adjacent areas within the City of Pittsburg. District staff sees this as an opportunity to join with the City in planning a coordinated trail and open space system. **6-1**

To the extent that the proposed project involves substantial grading, landform alteration and development of estate homes on hilltops and slopes, we are concerned with the visual impacts as viewed from future trail and open space on the base. The Final EIR should provide additional visual analysis from the vantage point of the ridgeline property located on the base, to the southwest of the project.

We are also concerned that the development is proposed for an area of the southwest hills which is currently outside of the City's Sphere of Influence and is zoned as Open Space. As noted in the EIR, *Development would preclude use of the site for other future beneficial uses, such as regional parkland that could possibly be tied in with the Naval Weapons Station land when it is decommissioned and becomes available for nonmilitary purposes.* Existing open space not only **6-2**

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forms a buffer for land on the Weapons Station, but also forms part of a continuous habitat and animal migration corridor–the northern part of the Diablo range–running to the southwest and including the District's Black Diamond Mines Regional Preserve, Mt. Diablo and the Los Vaqueros watershed. As the EIR states (p.5-4): *Recently approved and anticipated development in the hills south of Pittsburg would eliminate grassland habitat and further fragment the grassland-dominated habitat of the area. Anticipated development could affect essential habitat for a number of special status species, including California tiger salamander, California red-legged frog, San Joaquin kit fox and several special-status plant species...Because of its location along the crest of the hills in south Pittsburg, development of the site would form a barrier to movement of wildlife through the surrounding undeveloped lands, which are designated as open space in the General Plan.* This project should be evaluated in the context of the Eastern Contra Costa County Habitat Conservation Plan, currently being formulated. Mitigation measures outlined in the Final EIR should fully address cumulative local and regional impacts to wildlife migration in this corridor, and to and from the significant habitat at the Concord Naval Weapons Station.

6-2

Thank you for the opportunity to comment on this EIR. We would like to meet with City staff to explore opportunities for a coordinated open space and trail access system in the area to the northeast and east of the Concord Naval Weapons Station. We will look forward to receiving a copy of the final EIR.

Sincerely,

Brian Wiese

Brian Wiese
Interagency Planning

LETTER
6
RESPONSE

East Bay Regional Park District
Brian Wiese
Interagency Planning
February 25, 2002

6-1 It is likely that views of the development would be seen from future trail alignments in the open space area presently owned by the U.S. Navy. The direct effect of the view impact would depend upon the trail alignment and the proximity of hikers to the development. In discussions with Park District staff (B. Weiss, August 14, 2002), the Joint Use Plan developed for the Concord Naval Weapons Station indicates that trails would follow existing fire roads that presently criss-cross the Weapons Station property. The top of the knolls also would be available to hikers wishing to take in views from higher elevations.

A review of the USGS topographic map for the project site area shows an existing fire trail that starts at Bailey Road, climbing the hills to a point where it extends parallel to the Weapons Station boundary for approximately 500 feet. Prior to reaching this parallel point, the northerly views of the Delta are blocked by a hilltop that is located within the project site between the Weapons Station boundary line and the southerly edge of development. The fire road then follows the 800-foot contour to the west/southwest where it eventually drops down to connect with an existing roadway in the Weapons Station. This trail comes to within 125 feet of the nearest lot in the proposed subdivision. Four of the proposed houses would block northerly views to the Delta along 500 feet of the trail. Using the methodology on page 4.10-7 of the Draft EIR to determine if a visual impact is significant or insignificant, the blockage of the view over a length of 500 feet is not considered a significant impact because the duration of the view is short and the frequency of viewers would be sporadic.

6-2 We would concur that existing open space forms a buffer for land on the Concord Naval Weapons Station property. However, it should be noted that, with the exception of the northwest corner of the project site, the parcel was included within the County's urban limit line (ULL) which was established to restrict the extent of urban development within the County.

As discussed under Impact 4.8-4 in the Draft EIR, the project would obstruct opportunities for wildlife movement across the site and in the surrounding undeveloped lands of the southwest hills of Pittsburg. Mitigation Measure 4.8-4 was recommended to provide restrictions on development to protect and restore the important wetland complex and provide for continued wildlife habitat connectivity through the southwest hills. This includes preservation of the northern drainage as

a wildlife movement corridor, and a development restriction to provide a minimum 100-foot-wide upland corridor for wildlife south of the site and north of the chain-link fence along the Weapons Station property boundary. The cumulative loss of habitat is addressed on page 5-10 in the Revised Draft EIR.

Community
Development
Department

County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Phone:
(925) 335-1240

Contra
Costa
County

Dennis M. Barry, AICP
Community Development Director

Letter 7

March 4, 2002

Randy Jerome, Planning and Building Director
City of Pittsburg
65 Civic Avenue
Pittsburg CA 94565

Dear Mr. Jerome Randy

Thank you for the opportunity to review the Bailey Road Estates Draft Environmental Impact Report (DEIR). The Contra Costa County Community Development Department offers the following comments on the DEIR.

Location of the project site with respect to the County's urban limit line (ULL). The DEIR has conflicting information on whether the project site is within Contra Costa County's urban limit line (ULL). On page 1-1, the DEIR states the project site is "located outside . . . the County's urban limit line." On page 3-5, the DEIR states the project site is "within the original ULL of 1990 and in the ULL revision of 1999." It is the Community Development Department's understanding that the project is within the ULL adopted by the Board of Supervisors in 2000. Therefore the statement on page 1-1 should either be deleted or changed. **7-1**

Street Layout Within Project Area. The DEIR makes reference in several places to internal streets such as "Street A," "Street E," "Street O" and "Street N", but the document lacks a map that legibly shows these streets. The site maps in the document are difficult to make out in terms of the street layout, and the street names are illegible. This makes it difficult to understand some of the transportation analysis. A plan showing street layout (but without street names) is provided on page 6-17 for one of the alternatives that was analyzed ("Alternative Plan"). A similar diagram, with street names, would be helpful for all the alternatives. **7-2**

Pedestrian Circulation and Transit Service. The Transportation/Circulation section includes a brief discussion of pedestrian and transit issues on page 4.4-33. As noted before, the lack of an adequate street map makes it difficult to comment on the project's possibilities for bicycle and pedestrian movement. Both types of transportation are increasingly important in East County, in light of growing peak-period congestion on the region's major routes. **7-3**

The project appears to be approximately one mile south of the Pittsburg/Bay Point BART Station. However, the EIR does not evaluate the impacts of the project on parking demand at the BART station and BART station. The project's impact on BART should be evaluated given its **7-4**

proximity to BART and the fact that BART parking is fully used by existing patrons. Potential mitigation measures could include funding a peak-period van shuttle service that would take the project's residents to and from the BART station. The applicant should discuss the operation of such a shuttle with BART and Tri Delta Transit. This could also help alleviate vehicular traffic along Bailey Road, which the DEIR acknowledged is limited from a capacity and operational standpoint (see "Bailey Road improvements," below). 7-4

Bailey Road improvements. Page 4.4-1 of the document notes that Bailey Road is a two-lane road with "minimal paved or graded shoulders and numerous horizontal and vertical curves" for about half of the project site's frontage. However, traffic limitations on this segment of Bailey Road aren't identified as an impact. The applicant should consult with the Contra Costa County Public Works Department to determine if capacity or operational improvements are feasible to this stretch of Bailey Road. If improvements are feasible, the applicant should contribute those improvements, pending the discussions with the Public Works Department. It is the Community Development Department's understanding that the County's Bay Point Area of Benefit project list doesn't include any improvements to that stretch of Bailey Road. 7-5

Future Development Assumptions. Page 4.4-13 lists the assumptions for future development used in the DEIR. Please clarify if this lists includes buildout of the development assumed for the Pittsburg/Bay Point Specific Plan. Also clarify if these assumptions allow the City to determine if this project will comply with traffic standards even with buildout of the General Plans for the County and the City. Given the location and timing of the project application for Alves Ranch, the DEIR should include a scenario that identifies the impact of Bailey Estates, with and without buildout of Alves Ranch. Such information will enable the City to determine how much development, above the level permitted by adopted General Plans, can be accommodated and still be in compliance with the traffic standards required by Measure C-88. 7-6

Funding Mitigation Measures. The EIR should clarify that the developer shall be solely responsible for funding the signal at the project's intersection with Bailey Road (measure 4.4-2C). 7-7

If you have questions about these comments, please contact me at (925) 335-1240.

Sincerely,

Steven L. Goetz
Transportation Planning Division

cc: J. Greitzer, TRANSPLAN
P. Roche, Community Development Dept.
S. Kowalewski, Public Works Dept

LETTER
7
RESPONSE

Contra Costa County, Community Development Department
Steven L. Goetz
Transportation Planning Division
March 4, 2002

7-1 Page 1-1 of the Original DEIR was incorrect regarding the urban limit line (ULL). With the exception of the northwest corner of the parcel, the project site is located within the ULL as correctly stated on page 3.5. The entire northern portion of the site will remain as permanent open space. Page 1-1 of this Revised Draft EIR has been revised to reflect the correction.

7-2 Comment noted regarding the legibility of the street names. Figure 2-3 has been modified to show the street names.

7-3 As discussed on page 4.4-44 of the Revised Draft EIR, all internal streets provide sidewalks to allow convenient pedestrian movement. Most internal streets are local streets, without Class I or II bicycle facilities. Class II bicycle facilities will be provided on Street N, which may become an extension of San Marco Boulevard.

7-4 BART is currently developing plans to expand their parking lot at this station. The Park & Ride lot on Bliss Avenue is scheduled to reopen soon. BART is also planning to extend service further east, which will decrease parking demand at the Bay Point station.

7-5 This section of Bailey Road will be annexed into the City of Pittsburg as part of this development. Improvements on Bailey Road along project frontage will be constructed as part of this project to provide acceptable operations.

7-6 Refer to response to comment 10-4 for a description of the future year analysis conducted here, and its consideration of the Pittsburg/Bay Point BART Station Area Specific Plan. The Alves Ranch development application has been analyzed as a probable future project in this Revised Draft EIR.

7-7 Mitigation Measure 4.4-2C states that the "applicant/developer shall signalize one of the two project access intersections with Bailey Road." This is intended to mean that the applicant/developer is solely responsible for this mitigation measure.

CONTRA COSTA COUNTY LOCAL AGENCY FORMATION COMMISSION
651 Pine Street, Eighth Floor • Martinez, CA 94553-1229
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EXECUTIVE OFFICER
ANNAMARIA PERRELLA

January 29, 2002

Letter 8

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PLANNING DIVISION
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Randy Jerome, Planning Mgr
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Re: Draft Environmental Impact Report (DEIR) – Bailey Road Estates

Dear Mr. Jerome:

Thank you for forwarding the subject document for LAFCO's review and comment. I note that this office responded to the Notice of Preparation (NOP) for the proposed project on February 8, 2001. Since that time, there have been many changes in LAFCO law – specifically, the Cortese-Knox-Hertzberg Act (CKH), operative January 1, 2001. CKH reiterates and emphasizes the Legislature's policies of discouraging urban sprawl, preserving open space and prime agricultural lands and also permits each LAFCO, through adoption of written policies and procedures, to determine how it will implement the broad intent of the Act. **8-1**

Among the required LAFCO approvals for the proposed Bailey Estates Residential Development are the annexations and sphere of influence (SOI) amendments to the City of Pittsburg, Contra Costa Water District (CCWD) and to the Delta Diablo Sanitation District (DDSD). In my response to the NOP, I questioned whether or not detachment from the Ambrose Recreation & Park District is required. I don't recall the question being addressed in the DEIR. **8-2**

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COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

One of the most important changes in CKH is in the section dealing with SOIs. Please refer to Section 56425 wherein it states, in part, that at least 30 days prior to submitting an application to the Commission for a determination of a new SOI, or to update an existing SOI, representatives from a city shall meet with county representatives to discuss the proposed sphere. While LAFCO does not have a direct role in land use, boundary change decisions and SOIs do have implications on land use. Therefore, the city-county meeting and any attempt to reach mutual agreement would play an important role in LAFCO's decision-making process. **8-3**

Additionally, please review Section 56430 which has been added to the Government Code and is related to the SOI requirement. While the guideline for service reviews (56430(d)) has not yet been completed, the City may wish to integrate the requirement through its current environmental review process and/or other documents required by the Commission prior to making determinations on jurisdictional changes. Those documents include a Plan for Providing Services (PPS) required pursuant to Section 56653 of the Government. A PPS is required from each affected agency; however, if addressed properly, the Final EIR may also serve as the City's PPS. **8-4**

The new law also adds to factors the Commission must consider; therefore, please review Sections 56668 and 56668.5. Note that the new Section 56668 requirements are the ability of the agency to provide services and sufficiency of revenues for those services; the timely availability of an adequate water supply; the extent to which the proposal will assist the receiving entity with its fair share housing needs; any comments from owners or landowners; and information relating to existing land use designations. Note also that Section 56668.5 authorizes the consideration of regional growth goals as an optional element. **8-5**

The site of the proposed Bailey Road Estates Residential Development (APNs 097-230-003, 004) is located in the hills at the southern edge of the City, adjacent to Bailey Road at its eastern boundary and the Concord Naval Weapons Station at its western boundary. While much of the project site is located inside the Contra Costa County Urban Limit Line (ULL), a portion located at the northwesterly boundary is outside the ULL. When the County **8-6**

adopted the ULL (Measure C), LAFCO was "advised" to honor the ULL when considering changes of organization or reorganizations, and this Commission has a general policy to honor the ULL and to deny annexations and SOIs beyond the ULL "unless the proponents present evidence demonstrating that the need for the SOI change or annexation compellingly outweighs the public interest in limiting growth to areas within the ULL". 8-6

The project applicant proposes to subdivide 122 acres of the 256-acre parcel for development of 319 single-family residential units; the remainder of the project site would be designated Open Space. LAFCO must consider the preservation of open space when determining local governmental boundaries, so please explain why annexation to CCWD and DDSD is necessary for any portion of the Open Space designation. 8-7

Finally, I realize that since the NOP for the proposed project was submitted for review and comment, many changes have occurred in LAFCO law. So, if you have any questions or need clarification on any of the new policy or procedural changes, please call me. Again, thank you for forwarding the DEIR to LAFCO for comment.

Sincerely,

Annamaria Perrella

Annamaria Perrella

cc: LAFC Commissioners

LETTER 8 RESPONSE

Contra Costa County Local Agency Formation Commission
Annamaria Perrella, Executive Officer
January 29, 2002

8-1 Comments noted regarding the policies of the Cortese-Knox-Hertzberg Act in discouraging urban sprawl and preserving open space and prime agricultural lands. The project site's northern boundary is located adjacent to the City's southern city limit and sphere of influence boundaries.

8-2 The project site would be detached from the Ambrose Park and Recreation District, providing the site is annexed to the City of Pittsburg. Residents of the project site would partake of the City's recreational services. Table 2-1 has been revised to reflect this change.

8-3 Information pertaining to the Sphere of Influence (SOI) is noted. The City representatives will meet with County representatives to discuss the proposed changes to the SOI. The change in the SOI would coincide with the County urban limit line.

8-4 The Draft EIR addresses the infrastructure required to serve the project site. This would necessitate annexing the property to the Contra Costa Water District and the Delta Diablo Sanitation District. The applicant would be responsible for the construction and upgrade of facilities prior to the issuance of building permits. Deficiencies with the current systems are discussed in Section 4.7 of the EIR. The Plan for Services will be provided by the City of Pittsburg utilizing the information contained in the EIR.

8-5 Section 56668 of the Local Agency Formation Commission (LAFCO) law identifies factors to be considered when reviewing an annexation proposal. Much of the information required has been addressed in the EIR. Specifically, the EIR addresses the loss of agricultural land, project site topography, consistency with City plans/policies, drainage boundaries, proximity to populated areas, and provision of public services. The project site has been planned for development by the City of Pittsburg and is so designated in the recently approved General Plan update.

8-6 The commentor is correct in that a small portion of property in the northwest corner is located outside the ULL. This is the area where the water tank would be located. The text in the EIR has been revised to reflect this information.

8-7 Annexation of the open space in the northern portion of the project site would not be necessary as this area would remain as permanent open space. However, when extending the service district boundaries from the southern edge of the City, it would seem logical that this area would be included so as to avoid a break in the boundary alignment even though the land would not be developed. It also should be noted that infrastructure lines (water, sewer, etc.) would be extended along Bailey Road adjacent to the open space area.

TRANSPAC Transportation Partnership and Cooperation

Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and Contra Costa County
100 Gregory Lane, Pleasant Hill, California 94523 (925) 671-5250

Letter 9

Mr. Randy Jerome
Planning and Building Director
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

February 26, 2002

Dear Mr. Jerome:

TRANSPAC, the Regional Transportation Planning Committee for Central Contra Costa, appreciates the opportunity to comment on the Bailey Road Estates Draft Environmental Impact Report (Draft EIR) and offers the following comments.

1. Page 4.4-7, Please note that TRANSPAC concurs with the statement of the City of Concord Transportation Manager regarding Bailey Road. It is not a designated Route of Regional Significance in the Central County Action Plan for Routes of Regional Significance. **9-1**

On page 4.4-33, we noted the statement regarding the consideration of the "ultimate expected widening of Bailey Road from two to four lanes." TRANSPAC suggests that the Draft EIR indicate that the widening includes only the City of Pittsburg portion of Bailey Road. **9-2**

2. Page 4.4-12, Second bullet under Year 2010 regarding the assumed extension of West Leland to Willow Pass Road in Concord. The Draft EIR should note that the City of Concord continues to object to this extension. **9-3**

3. Page 4.4-28 and 4.4-30, Mitigation Measures 4.4-1A (Bailey Road/Myrtle Drive) , 4.4-1B (Bailey Road/Concord Boulevard), Mitigation 4.4-2A (Bailey/Myrtle Drive) and Mitigation 4.4-2B (Bailey Road/Concord Boulevard) states "The City of Pittsburg shall establish and administer a traffic improvement fund. When the City of Concord and Contra Costa County determine improvements are to be made at the intersection, the City of Pittsburg will disburse the funds for these improvements". **9-4**

This is a straightforward and established approach to the implementation of approved mitigation measures located in a neighboring jurisdiction. This approach which should be incorporated into the Alves Ranch EIR (comments sent under separate cover). The City of Pittsburg could also construct the approved mitigations using the funds contributed by the applicant.

4. Page 4.4-30, Second full paragraph on the funding and implementation of Base Case improvements, please clarify and/or define "and receive pay backs from subsequent local development." **9-5**

5. Please note our comment on the Alves Ranch Draft EIR that a common horizon year for both projects rather than the 2010 vs. 2025 approach, would greatly facilitate an understanding of the impacts of the two projects. 9-6

6. The impacts of Bailey Estates, Alves Ranch and the Pittsburg/Bay Point Bart Specific Plan needs to be assessed relative to the Traffic Service Objectives (TSO) in the Central and East County Action Plans and included in the Draft EIR. 9-7

7. From a process standpoint, the preparation of the Draft EIR should have included consultations with the City of Concord on the project and proposed mitigation measures. Mitigation measures are proposed to be located in and funded by the City of Concord without consultation with City staff. Please note that TRANSPAC remains concerned about the "no-consultation" process used to develop this document. Those concerns have been relayed to TRANSPLAN and the Transportation Authority. Those letters should be considered as comments on this project and are attached for inclusion in the Draft EIR. 9-8

Thank you for the opportunity to comment on this important project proposal.

Sincerely,

Barbara Neustadter
TRANSPAC Manager

cc: Julie Pierce, TRANSPAC Chair
TRANSPAC Representatives
Brad Nix, TRANSPLAN Chair
John Greitzer, TRANSPLAN staff
TRANSPAC TAC

Pittsburg Bailley Rd. Estates Comment letter.wpd

TRANSPAC Transportation Partnership and Cooperation

Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and Contra Costa County
100 Gregory Lane, Pleasant Hill, California 94523 (925) 671-5250

The Honorable Donald Freitas, Chair
Contra Costa Transportation Authority
Hookston Square
3478 Buskirk Avenue, Ste. 100
Pleasant Hill, California 94523

February 26, 2002

Dear Chair Freitas:

TRANSPAC has concerns about the City of Pittsburg's compliance with the Measure C Growth Management Program as noted in the attached letter to TRANSPLAN. We are concerned that Pittsburg did not consult with the City of Concord during the development of mitigation measures for the Alves Ranch or Bailey Estates Projects. Some of the mitigation measures to be located in Concord. Concord is also expected to fund these mitigation measures.

Project development actions and preparation of the environmental assessments took place during the 2000-2001 Compliance Checklist reporting period. Unless the consultation process is rectified and concurrence achieved on the placement and funding of the mitigation measures, TRANSPAC may be compelled to object during the review of the City's Checklist which is expected to be submitted later this year. We regret that such action is under consideration. Absent resolution, we cannot ignore this lack of consultation and coordination given the principles and requirements of the Growth Management Program.

TRANSPAC directed that this situation be brought to the Authority's attention. We would appreciate any counsel by Authority members or staff on how to resolve the situation beyond the remedies we have already suggested to TRANSPLAN.

TRANSPAC appreciates the opportunity to bring this issue to the Authority's attention and we look forward to its timely resolution.

Sincerely,

Julie Pierce

Julie Pierce
Chair

cc: TRANSPAC Representatives
TRANSPAC TAC
Brad Nix, Chair TRANSPLAN
Supervisor Federal Glover
Bob McCleary, CCTA
Martin Engelmann, CCTA
John Greitzer, TRANSPLAN staff

CCTA ltr re reg planning.wpd

TRANSPAC Transportation Partnership and Cooperation

Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and Contra Costa County
100 Gregory Lane, Pleasant Hill, California 94523 (925) 671-5250

The Honorable Brad Nix, Chair
TRANSPLAN
c/o Contra Costa Community Development Department
651 Pine Street, North Wing 4th Flr.
Martinez, California 94553

February 26, 2002

Dear Chair Nix:

At its February 14, 2002 meeting, TRANSPAC received a briefing by City of Concord staff on three proposed projects for which the City of Pittsburg is either a partner or sponsor. The projects are the Pittsburg/Bay Point Station Area Specific Plan, the Bailey Road Estates Project and the Alves Ranch Project. During the review process which began in 1999, the City of Concord raised a series of specific concerns regarding the Pittsburg/Bay Point Station Area Specific Plan including the lack of consultation on mitigation measures proposed by Pittsburg to be located in and paid for by the City of Concord. Concord's comment letters are attached to depict the history of the process and the specific issues raised by the City. Similar issues have arisen in the Bailey Estates and Alves Ranch development process. In addition, TRANSPAC has only indirectly or by specific request to City staff received notification of City of Pittsburg projects which may impact Central County jurisdictions

Given that three projects are at issue, TRANSPAC is requesting TRANSPLAN's assistance in assuring that its jurisdictions adhere to the requirements of the Measure C Growth Management Program. The Growth Management Program requires notification of and consultation on environmental documents based on a proposed project's impacts, not its location in a region.

TRANSPAC is a proponent of the "Oakhurst Model" pioneered by the City of Clayton. This approach ensures that downstream jurisdictions impacted by a development are consulted, concur in proposed mitigation measures which are then paid for by the jurisdiction approving the development through Conditions of Approval placed on the project. The City of Clayton paid for road improvements in both the City of Concord and City of Walnut Creek to mitigate the impact of the Oakhurst development on these downstream jurisdictions. Only an agreement between and among the parties establishing mitigations and concomitant payment is required. We believe that the City fo Pittsburg should use the same approach for development projects which impact Central County jurisdictions and for which mitigation measures are proposed in Central County.

Another issue which requires our collective attention and needs to be resolved is the proposed West Leland extension to Willow Pass Road in Concord. We hope that the joint TRANSPAC/TRANSPLAN Subcommittee can convene as soon as practicable to address this road extension, the impact of developments in Central County and any other issues which may facilitate planning in our respective areas.

We look forward to continuing to work together not only to ensure Growth Management Program compliance but also to enhance regional planning and cooperation. Please do not hesitate to contact me if you have questions or wish to discuss these issues in more detail.

Sincerely,

Julie Pierce

Julie Pierce
Chair

cc: TRANSPAC Representatives
Supervisor Federal Glover, Contra Costa County Board of Supervisors
Bob McCleary, CCTA
Martin Engelmann, CCTA
John Greitzer, TRANSPLAN staff
TRANSPAC TAC

Attachments
TRANSPLAN ltr re reg plan.wpd

City of Concord
1950 Parkside Drive, MS/01
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Office of the City Manager
Telephone: (925) 671-3150

Concord

City Council
Bill McKenzie, Mayor
Mark A. Peterson, Vice Mayor
Helen M. Allen
Laura M. Hoffmeister
Michael A. Pastrick

Lenore Kelly, City Clerk
Thomas Wentling, City Treasurer

Edward R. Jones, City Manager

January 11, 2002

East County Regional Planning Commission
c/o Contra Costa County Community Development Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Re: Final Environmental Impact Report (FEIR) for the Pittsburg/Bay Point BART Station Area Specific Plan

Dear Members of the East County Regional Planning Commission:

I am writing on behalf of the Concord City Council regarding the Pittsburg/Bay Point BART Station Area Specific Plan. We recognize that the planning concepts of transit oriented development in the proposed Specific Plan have positive merits. However, there are significant impacts with the proposed development in the Specific Plan that have not been adequately addressed in the Final Environmental Impact Report (FEIR). The FEIR was determined by the County Zoning Administrator on January 7, 2002 to be in compliance with the CEQA guidelines. The City of Concord's stated position is that the FEIR is inadequate in its failure to identify and provide feasible mitigation measures. The proposed mitigation measures identified in the FEIR do not mitigate the significant impacts that have been identified by Concord in our letters dated September 18, 2001 and September 29, 1999 (Attachments A and B).

The FEIR fails to consider feasible mitigation measures that are within the power of the County to impose with respect to mitigation of traffic impacts at the intersection of Bailey Road and Concord Blvd and the intersection of Bailey Road and Myrtle Drive. It impermissibly delegates the burden of mitigation solely on the City of Concord. In order to reconstruct the Concord Boulevard/Bailey Road intersection as described in the FEIR, Concord would have to widen the street into a newly constructed park along Bailey Road and widen Concord Boulevard into what now is the back yard of a home. We do not consider this alternative to be feasible. Mitigation of project traffic impacts at these intersections can be achieved by installing a traffic signal and implementing a metering program at the intersection of Bailey Road and Myrtle Drive, an intersection that is two

thirds within the jurisdiction of the County. With the implementation of this mitigation measure improvements would be unnecessary for the Bailey Road and Concord Boulevard intersection. The FEIR is inadequate in its failure to analyze and propose implementation of this feasible mitigation measure.

The metering is a feasible alternative that encourages traffic to use the freeway system. Over $600,000,000 has been spent to increase traffic capacity on SR4, SR 242, and I-680. The metering is consistent with the TRANSPAC Action Plan tenet, *That TRANSPAC make a commitment to establish a traffic management and signal synchronization plan within Central County to manage traffic flow. This management plan is necessary to ensure that jurisdictions, which approve development also, provide the storage capacity (reservoir) for that traffic. Reservoirs create holding areas for the vehicles entering Central County. It is hoped that the congestion created by these holding areas will cause modification to behavior, and shift these vehicles to the freeway system.* The Contra Costa Transportation Authority (CCTA) also adopted this tenet in the "Contra Costa Countywide Comprehensive Transportation Plan." The metering initiated by Concord on Kirker Pass Road at Myrtle Drive coupled with the increased capacity on SR 4 has proven that traffic will shift to the freeway. In addition, findings in the East-Central Traffic Management Study show that it is faster for vehicles to use the freeway system than to traverse the arterial streets in Concord and Walnut Creek.

Each public agency is responsible for complying with CEQA and the Guidelines. A lead agency must meet its own responsibilities under CEQA and may not rely on comments from other public agencies or private citizens as a substitute for work. CEQA requires the lead agency to accomplish their project. CEQA mandates that agencies not approve projects which have significant adverse effects when feasible alternatives or feasible mitigation measures can substantially lessen such impacts. The lead agency is responsible for identification and providing for feasible mitigation measures for the project under its jurisdiction. The lead agency cannot avoid imposing mitigation measures within its power simply because the City of Concord may have the ability to impose similar or related conditions. The FEIR should contain a sufficient degree of analysis to provide the decision makers with information which enables them to make an intelligent decision which takes into account of environmental consequences. While the lead agency is not required to engage in an exhaustive analysis of all environmental effects of the proposed project, the sufficiency of the FEIR is to be reviewed in the light of what is reasonably feasible.

The Pittsburg /Bay Point BART Station Area Specific Plan requires foresight on a regional level and cooperation between jurisdictions to resolve issues. I would request that before the East County Regional Planning Commission take action and forward this item to the Board of Supervisors that there is an opportunity to explore the options outlined above as potential mitigation measures. If you have any questions regarding

these comments, or would like to discuss them further please contact John Templeton, Transportation Manager at 671-3129.

Very truly yours,

Edward R. James
City Manager

Attachments:

Attachment A: Letter to Mr. James Kennedy, Deputy Director, Redevelopment Agency, dated September 18, 2001 from the City of Concord

Attachment B: Letter to Mr. James Kennedy, Deputy Director, Redevelopment Agency, dated September 29, 1999 from the City of Concord

cc: Concord City Council
James Kennedy, Deputy Director, Redevelopment Agency
Board of Supervisor, Contra Costa County
Board of Directors, Bay Area Rapid Transit District
Mayor and Council, City of Pittsburg
Will Casey, City Manager, City of Pittsburg
Lydia Du Borg, Assistant City Manager
Jim Forsberg, Director of Planning and Economic Development
Deborah Raines, Planning Manager
John Templeton, Transportation Manager
Mark Boehme, Assistant City Attorney
Mike Vogan, Director of Public Works – Maintenance Services
Bob McCleary, Director of Contra Costa Transportation Authority
TRANSPAC

ATTACHMENT A

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Concord, California 94519-2578
www.ci.concord.ca.us

Office of the Mayor
Telephone (925) 671-3158

Concord

Mayor Mark A. Peterson
Mark A. Peterson

Council
Members
Edward R. James, City Manager

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September 18, 2001

James Kennedy, Deputy Director, Redevelopment Agency
Contra Costa County Community Development Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Re: Recirculated Draft Environmental Impact Report for the Pittsburg/Bay Point BART Station Area Specific Plan

Dear Mr. Kennedy:

I am writing on behalf of the Concord City Council regarding the Recirculated Draft Environmental Impact Report (DEIR) for the Pittsburg/Bay Point BART Station Area Specific Plan. The Recirculated DEIR incorporates revisions that include an evaluation of two additional alternatives. The two alternatives are Alternative 5 (Very High Commercial/Office and Low Residential) and Alternative 6 (High Commercial/ Office and High Residential.) The land development assumptions for the alternatives include an increase in density and height for the commercial and office uses and a reduction in the number of residential units.

After review of the two alternatives in the Recirculated DEIR, it is apparent that the document still has not addressed the concerns previously identified in our letter dated September 29, 1999, in response to the first DEIR (see Attachment A). The City reiterates it concerns about inadequacies of the DEIR in regard to the regional planning context, traffic impacts and inconsistencies with State Planning Law. The two alternatives contained in Recirculated DEIR do not avoid or substantially lessen any of the significant impacts identified with the proposed project and should be rejected. The increased density of the alternatives would encourage and accelerate future suburban sprawl in and near the Specific Plan area.

Land Use and Planning

The Recirculated DEIR does not provide an adequate site plan that fully assesses the potential Land Use and Planning impacts of Alternatives 5 and 6. The DEIR needs to include a more descriptive site plan that illustrates the connections between the proposed and existing neighborhoods. It appears that the location of the proposed commercial, office, and residential land uses is very disconnected and not well integrated with the existing neighborhoods. The alternatives do not create a commercial/retail core area that would serve the local residents. The location and size of the commercial/retail would suggest that the retail is more regionally oriented and impacts associated with this type of development need to be identified.

The Recirculated DEIR does not provide an adequate description on the final land disposition in the Specific Plan area. The Specific Plan incorporates properties that are located in Contra Costa County and the City of Pittsburg. The Specific Plan does not discuss if the properties located in Contra Costa County will be annexed to the City of Pittsburg. The FEIR needs to provide clarification on the final land disposition in the Specific Plan area.

Transportation/Traffic

Impacts on traffic in Concord are still inadequately addressed in the Recirculated DEIR. The comments in the September 29, 1999 letter are still appropriate. The Recirculated DEIR states that the proposed project causes significant traffic impacts on Bailey Road at the intersections of Concord Boulevard and Myrtle Drive. The agencies proposing the mitigations still have not communicated with the City of Concord regarding the feasibility of the proposed mitigations. As proposed, the mitigation on Bailey Road at Concord Boulevard would widen the street by removing land from a linear parkway. At Myrtle Drive, the road would need to be widened onto the Concord Naval Weapons Station property. Other mitigations need to be evaluated to address these deficiencies.

Mitigation Measure 10-3 regarding the Bailey Road/Concord Boulevard intersection needs clarification. Bullet #2 states "In addition to the improvements listed above, provide seven exclusive right-turn lanes on the westbound Concord Boulevard approach and on the northbound Concord Boulevard approach." There is no discussion in the text regarding "seven exclusive right-turn lanes." Concord Boulevard does not extend both northbound and westbound.

Assumptions for the 2010 roadway network are not correct. The DEIR assumes that West Leland Road is extended to Avila Road and ultimately to Willow Pass Road in Concord. The City of Concord is opposed to this connection. It is not in the City of Concord's General Plan. The connection will cause significant impacts on Willow Pass Road at both Avila Road and the nearby on/off ramps to SR 4. The assumed connection

7

needs to be deleted, the trips reassigned on the network, and the Level-of-Service recalculated for all intersections.

State Planning Law

The Recirculated DEIR does not provide a complete analysis on the inconsistencies between the Goals, Objectives, Policy, Land Use and Density Designations of the County's General Plan and the proposed Specific Plan. There is no description of the existing zoning and general plan designations for the parcels located in the County. The land development assumptions for Alternatives 5 and 6 would substantially increase the density resulting in an intensification of land use, which is not consistent with the General Plan. The proposed Specific Plan is out of compliance with the planning process that is outlined in State Planning Law. State Planning Law (Article 8, Sec. 65454) requires that "*no specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan.*"

Final Environmental Impact Report

The Final EIR needs to address the concerns and significant impacts that the City of Concord has identified with the two alternatives. Additionally, the FEIR needs to respond to the comments provided in the letter dated September 29, 1999. The Concord City Council's established position is that the DEIR for the Specific Plan is inadequate in its discussion of the regional planning context, traffic impacts, and inconsistencies with State Planning Law.

If you have any questions regarding these comments, or would like to discuss them further, please contact Deborah Raines, Planning Manager at 671-3369 or John Templeton, Transportation Manager at 671-3129.

Sincerely,

Edward R. James
City Manager

cc: Concord City Council
Board of Supervisors, Contra Costa County
Board of Directors, Bay Area Rapid Transit District
Mayor and Council, City of Pittsburg
Will Casey, City Manager, City of Pittsburg
Lydia Du Borg, Assistant City Manager
Jim Forsberg, Director of Planning and Economic Development
Mike Vogan, Director of Public Works – Maintenance Services
Bob McCleary, Director of Contra Costa Transportation Authority
TRANSPAC

ATTACHMENT B

Office of the Mayor
Telephone: (925) 671-3158

Concord

Laura M. Hoffmeister
Bill McMorigal
Mark Peterson

Lenore Kridl, City Clerk
Thomas Wentling, City Treasurer

Edward R. James, City Manager

September 29, 1999

James Kennedy, Deputy Director, Redevelopment Agency
Contra Costa County Community Development Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, CA 94553-0095

Re: Pittsburg/Bay Point BART Station Area Specific Plan Draft Environmental Impact Report

Dear Mr. Kennedy:

I am writing on behalf of the Concord City Council regarding the Draft Environmental Impact Report for the Pittsburg/Bay Point BART Station Area Specific Plan. The Concord City Council has taken a unanimous position that the Draft Environmental Impact Report is inadequate in its discussion of regional planning context and of traffic impacts. Also, the Draft Environmental Impact Report identifies necessary mitigation in the City of Concord which the City believes may be infeasible due to noncompliance with the City of Concord General Plan. In addition, the County proposes a planning process which does not conform to State of California planning law. Of more importance than the environmental document, the City Council believes the project lacks merit and is contrary to rational planning. In simple terms, this County should not be in the large scale urban development business.

Regional Planning

The Draft Environmental Impact Report discussion of land use inadequately addresses the proposal's regional planning significance. The Specific Plan promotes a new urban center or development node without identifying its impact on increased sprawl and congestion. The appropriate place for urban-scale development is in the downtown areas of cities, not in unincorporated areas. Cities including Concord have existing infrastructure in place and plans for future infrastructure development to support urban-scale land use. While the Specific Plan transit village concept includes laudable aims such as countering sprawl and utilizing a location already served by an existing freeway and BART station, the actual effect is to increase both

sprawl and congestion. As Concord has experienced with the Pleasant Hill BART station specific plan area, increased development intensity in unincorporated areas reduces the ability of cities to intensify development in downtowns, where the infrastructure and community context can accommodate such development with minimal congestion impacts and no sprawl. The proposed Specific Plan Area is not being planned relative to any context of sound regional planning and the principal of orderly, sustainable development of urban development centers. While the proposed development scheme probably has positive fiscal effects for the lead and responsible agencies, the proposal is not consistent with a sound city or regional planning framework. The lead agency must address these city and regional land use effects, both as direct and cumulative impacts of the proposal.

Traffic

Impacts on traffic in Concord are inadequately addressed in the Draft Environmental Impact Report. While the Specific Plan is described as emphasizing a transit village with pedestrian circulation, the traffic analysis identifies an estimated 21,604 new daily trips added to the local roadway network

The Draft Environmental Impact Report shows Route 4 projected to operate at LOS F in the peak hour, peak direction, and indicates that the traffic added due to the Specific Plan development will not be a significant impact. The impact on Route 4 is a significant impact, rather than "not significant" as indicated in the Draft Environmental Impact Report, and the Draft Environmental Impact Report should be so amended. As stated in the Draft Environmental Impact Report, "Specific Plan development would add traffic to those sections of the State Route 4 freeway that are projected to be experiencing LOS F commute period operation by 2010 (peak direction travel over the Willow Pass Grade). This impact is considered less than significant." (Impact 10-4, DEIR page 10-46). We believe that the cumulative effect of high intensity development in the plan area plus continued LOS F commute period operation of Route 4 will drive more trips to Bailey Road and will have a significant effect on Concord streets. Externalizing traffic impacts onto already-clogged Route 4 is a significant, unacceptable impact which will have unacceptable consequences for Concord. The Draft Environmental Impact Report should identify these impacts as significant and identify feasible approaches for mitigation of the impacts. The County should be in the business of solving regional traffic problems, not creating more traffic problems. The County should use its resources to help increase commuter parking at the Pittsburg/Bay Point BART station to enable more people to use BART and relieve Route 4 congestion.

Concord Blvd./Bailey Rd. Mitigations

In the traffic mitigations, the DEIR identifies improvements needed in Concord at Bailey Road and Concord Boulevard. The DEIR does not address the fact that Bailey Road is not in the

Concord General Plan Circulation Element as an arterial sized and designed to handle inter-regional arterial traffic. The DEIR does not address hazard to motorists as a result of increased traffic volumes on Bailey Road. The Bailey Road/Concord Boulevard intersection is projected to be severely impacted, going in the a.m. peak hour from LOS B in 1998 without the project to LOS E in 2010 with the project. In the p.m. peak hour, the change experienced would be from LOS C in 1998 without the project to LOS F in 2010 with the project. Mitigations proposed in the EIR but not discussed with the City are projected to mitigate levels to LOS B in the a.m. peak hour and LOS D in the p.m. peak hour. The agencies proposing the plan have not communicated with the City of Concord regarding the proposed improvements. No mechanism has been proposed to apply for approvals or consider agreements for such mitigations, which are outside the authority of the Lead Agency and named Responsible Agencies. The DEIR is faulty for failing to investigate the feasibility of the mitigation. The City of Concord may not consider the Master EIR to be a satisfactory CEQA document in the future in the event the lead agency approaches the City to implement the Concord Blvd./Bailey Rd. mitigation.

State Planning Law

The proposed adoption of the Specific Plan, which is not consistent with the underlying General Plans of Contra Costa County and the City of Pittsburg, is contrary to State planning law. As stated in the Draft Environmental Impact Report, California law allows cities and counties to use specific plans... to implement the jurisdiction's adopted General Plan. The law does not allow specific plans to dictate land use policy not addressed in General Plans. Before General Plan consistency findings can be made for the Specific Plan, the General Plans must be amended to consider comprehensively the consequences of scattered urban-scale nodes outside the downtown areas of cities and must address the location, type and intensity of development contemplated by the specific plan.

If you have questions regarding our concerns, please contact John Templeton, Transportation Manager, at 671-3129, or David Golick, Chief of Planning, at 671-3166.

Very truly yours,

Michael A. Pastrick
Mayor, City of Concord

c: Board of Supervisors, Contra Costa County
Board of Directors, Bay Area Rapid Transit District
Mayor and City Council, City of Pittsburg
Edward R. James, City Manager

LETTER 9 RESPONSE

TRANSPAC Transportation Partnership and Cooperation
Barbara Neustadter, TRANSPAC Manager
February 26, 2002

9-1 Refer to response to comment 10-1.

9-2 Bailey Road widening outside project frontage limits and City limits is no longer being assumed.

9-3 Refer to response to comment 12-2.

9-4 Comment noted regarding the establishment of a mitigation fund for traffic improvements.

9-5 "Pay backs" are reimbursements and may include traffic mitigation fee credit.

9-6 Refer to response to comment 10-3.

9-7 Refer to response to comment 10-2.

9-8 Refer to response to comment 12-8.

TRANSPLAN
ITEM #8
3/14/02

TRANSPLAN COMMITTEE
EAST COUNTY TRANSPORTATION PLANNING
Antioch • Brentwood • Oakley • Pittsburg • Contra Costa County
651 Pine Street – North Wing 4TH Floor, Martinez, CA 94553-0095

~~February 28,~~ March 14, 2002

RECEIVED
MAR 15 2002
PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

Mr. Randy Jerome, Planning and Building Director
City of Pittsburg
65 Civic Avenue
Pittsburg CA 94565

Letter 10

Dear Randy:

Thank you for the opportunity to review the Bailey Road Estates Draft Environmental Impact Report (DEIR). TRANSPLAN is a committee formed by the cities and the County in eastern Contra Costa County to review transportation planning issues of common concern. The Technical Advisory Committee of TRANPLAN met on February 19 to review this DEIR ~~and offers the following comments.~~ and comments were submitted to you on February 28th. Since that time, TRANSPLAN staff has been informed that the project does not require a General Plan Amendment. With this understanding, I am requesting that you consider the comments in this letter and disregard the February 28th correspondence.

1. **Routes of Regional Significance should be clarified.**

The Route of Regional Significance designation for Bailey Road ends south of West Leland Avenue. West Leland Road is a Route of Regional Significance.

10-1

2. **The DEIR should include statements on whether the Project adversely affects the ability of local jurisdictions to meet the Measure C-88 Traffic Service Objectives.**

The discussion of operational standards for intersections on page 4.4-7 should refer to the Traffic Service Objectives (TSOs) for Bailey Road that are set forth in the *East County Action Plan for Routes of Regional Significance*, adopted by the Contra Costa Transportation Authority in July 2000. The standards that apply to Bailey Road and its intersections are as follows:

- Bailey Road intersections from Canal to West Leland Avenue: Level of Service E.
- Other Bailey Road intersections: Level of Service mid-D (volume/capacity ratio of 0.85 or less).
- Delay index (ratio of peak-hour travel time to off-peak travel time) less than 2.0.

10-2

The ~~Measure C-88 Growth Management Program requires that localities, when reviewing a General Plan Amendment, determine whether or not such an amendment will adversely affect the ability of TRANSPLAN jurisdictions from meeting applicable TSOs. Therefore, this~~ project's impacts relative to each of the above standards should be evaluated. The DEIR

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includes level-of-service analysis but not a delay index analysis. If you need a copy of the *East County Action Plan for Routes of Regional Significance*, please let me know. 10-2

3. Long range impacts should assume all development allowed by adopted General Plans.

~~Be aware that CCTA's Technical Procedures advise local jurisdictions to evaluate revisions to General Plan assuming probable buildout of local General Plans. This is with the understanding that existing General Plans comply with growth management standards and that localities need to determine if a General Plan Amendment would adversely affect compliance with those standards. Please clarify if the 2010 analysis assumed buildout of the Pittsburg General Plan and of the County General Plan in the vicinity of the project. 2010 is only eight years in the future, which does not seem sufficient to estimate the long range impacts of a change in a General Plan.~~ 10-3

The TRANSPLAN TAC also reviewed the city's DEIR for the Alves Ranch project, which used a longer horizon year of 2025. A common horizon year for environmental documents prepared simultaneously by the same jurisdictions for the same area would be preferred in order to understand the traffic impacts of potential land use changes. The long range conditions for Bailey Road and for the State Route 4 freeway under the "no-project" scenario is significantly different between the two DEIRs.

4. Impacts of cumulative development proposals should be considered.

The DEIR should clarify whether the traffic analysis assumed buildout of the preferred alternative for the Pittsburg/Bay Point BART Station Area Specific Plan, which was jointly developed by the City of Pittsburg, Contra Costa County and BART. This plan is not included in Table 4.4-3, which lists only the approved developments that are assumed as part of the transportation analysis. Yet the plan has completed its FEIR. 10-4

The city should consider whether the impact of buildout of the Bailey Road Estates project, plus the Alves Ranch project, in addition to the Bailey Road project, would adversely affect the ability to meet Measure C-88 TSOs.

5. Information on the evaluation of freeway TSOs should be more accessible.

TRANSPLAN staff did not receive a copy of the Technical Appendix which includes the evaluation of the project's affect on the freeway TSO. This information well help localities understand if this project adversely affects their ability to meet the freeway TSO. Such information should be included in the body of the DEIR, instead of an appendix. 10-5

If you have questions about these comments, please let me know.

Sincerely,

John Greitzer,
TRANSPLAN Staff

Phone: (925) 335-1201 Fax: (925) 335-1300 E-mail: jgrei@cd.co.contra-costa.ca.us

g:\transportation\baileyestates tac letter.doc
cc: TRANSPLAN Committee
TRANSPLAN Technical Advisory Committee

Phone: (925) 335-1201 Fax: (925) 335-1300 E-mail: jgrei@cd.co.contra-costa.ca.us

LETTER 10 RESPONSE

TRANSPLAN Committee
East County Transportation Planning
John Greitzer, TRANSPLAN Staff
March 14, 2002

10-1 The roadway descriptions on page 4.4-1 of the Revised Draft EIR have been modified to show that Bailey Road is a Route of Regional Significance only for the segment between Willow Pass Road and West Leland Road, and that West Leland Road is a Route of Regional Significance.

10-2 As described in the comment, the *East County Action Plan for Routes of Regional Significance* sets forth Traffic Service Objectives (TSOs) for the significant routes in the East County region. The Delay Index is one of those TSOs, and compares the time required to drive a segment of road during peak-hour congested conditions with the time to drive that same segment during uncongested conditions. The Original Draft EIR did not address Delay Index calculations.

The Delay Index TSO for regionally significant routes is 2.5 for the SR 4 freeway, and 2.0 for suburban arterial routes such as Bailey Road. Tables C&R-1 and C&R-2 (on the following page) provide the Delay Index calculations for the relevant routes in the study area for AM and PM peak hours, respectively. A full description of the analysis scenario presented here (year 2025, with and without project) is provided in the response to comment 10-4.

Based on existing data, all study routes currently meet their TSO. Under 2025 No Project conditions, westbound SR 4 west of Bailey Road during the AM peak hour, and eastbound SR 4 both east and west of Bailey Road during the PM peak hour, would exceed the TSO. The addition of traffic from the proposed project would not cause a substantial change in the delay index on the SR 4 freeway.

Under 2025 No Project conditions, southbound Bailey Road between SR 4 and Leland Road is projected to exceed the TSO during the PM peak hour. Traffic from the proposed project causes a further reduction in the speed on this roadway and increases the delay index from 2.08 to 2.50. This represents a significant impact, and is discussed under Impact 4.4-3 of the Revised Draft EIR.

IMPACT C&R-1: Project-generated traffic would contribute to significant adverse impacts on Bailey Road between SR 4 and Leland Road, a Route of Regional Significance.

Table C&R-1
DELAY INDEX SUMMARY
AM PEAK HOUR

Roadway Segment	Direction	TSO[1]	Free-Flow Speed[2]	Existing Conditions[3]		2025 No Project Conditions		2025 With Project Conditions	
				Speed	Delay Index	Speed[4]	Delay Index	Speed[4]	Delay Index
SR 4 – West of Bailey Rd.	WB[5]	3.0	65	38	1.68	16	4.06	16	4.06
SR 4 –East of Bailey Rd.	WB[5]	3.0	65	38	1.68	24	2.71	24	2.71
Bailey Rd – Between SR 4 and Leland Rd.	NB	2.0	25	20	1.26	20	1.26	19	1.31
	SB	2.0	25	17	1.45	15	1.67	15	1.67

Notes:
1. Traffic Service Objective as presented in the *East County Action Plan for Routes of Regional Significance.*
2. Free-flow speed as presented in *East County Action Plan for Routes of Regional Significance.*
3. Existing speed and delay index as presented in the 1999 *Contra Costa Transportation Authority TSO Monitoring Report.*
4. 2025 speed estimation based on the East County Travel Demand Model.
5. Data for mixed-flow lanes only.

Source: Fehr & Peers Associates, September 2002.

Table C&R-2
DELAY INDEX SUMMARY
PM PEAK HOUR

Roadway Segment	Direction	TSO[1]	Free-Flow Speed[2]	Existing Conditions[3]		2025 No Project Conditions		2025 With Project Conditions	
				Speed	Delay Index	Speed[4]	Delay Index	Speed[4]	Delay Index
SR 4 – West of Bailey Rd.	EB	3.0	65	28	2.32	14	4.64	14	4.64
SR 4 –East of Bailey Rd.	EB	3.0	65	28	2.32	19	3.42	19	3.42
Bailey Rd – Between SR 4 and Leland Rd.	NB	2.0	25	22	1.14	15	1.67	14	1.79
	SB	2.0	25	21	1.19	12	2.08	10	2.50

Notes:
1. Traffic Service Objective as presented in the *East County Action Plan for Routes of Regional Significance.*
2. Free-flow speed as presented in *East County Action Plan for Routes of Regional Significance.*
3. Existing speed and delay index as presented in the 1999 *Contra Costa Transportation Authority TSO Monitoring Report.*
4. 2025 speed estimation based on the East County Travel Demand Model.
5. Data for mixed-flow lanes only.

Source: Fehr & Peers Associates, September 2002.

- **MITIGATION MEASURE C&R-1:** The project developer shall pay regional and local traffic mitigation fees to help fund the expansion of the capacity of Bailey Road between SR 4 and Leland Road.

With implementation of Mitigation Measure C&R-1, this impact would be reduced to a **less-than-significant** level. This impact and mitigation measure were not identified in the Bailey Road Estates Original Draft EIR, but have been incorporated into the Revised Draft EIR as Impact and Mitigation Measure 4.4-3

10-3 The long-range scenario for the Bailey Road Estates project has been extended to the year 2025, to be consistent with other environmental documents prepared on projects in the same general area. Further detail on this scenario is provided in response to comment 10-4.

10-4 The short-range analysis scenario for the Bailey Road Estates project was the year 2005, and the approved projects that were assumed to be in place by that time were shown in Table 4.4-3 and described on pages 4.4-11 and 4.4-12 of the Original Draft EIR. The Pittsburg/Bay Point BART Station Area Specific Plan is now the subject of a Final EIR that was certified by Contra Costa County; that environmental review process was generally concurrent with the preparation of the Bailey Road Estates EIR. According to City staff, it is unlikely that any Specific Plan-related development will occur by 2005; therefore, it is appropriate for the short-range scenario in the Bailey Road Estates EIR to assume no Specific Plan development.

As described in response to comment 10-3, the long-range scenario for the Bailey Road Estates EIR has been extended to 2025 for consistency with other EIRs completed in this time frame.

A new figure (Figure C&R-1) has been included, presenting the intersection turning movement forecasts for the 2025 No Project scenario.

The traffic expected to be generated by the Bailey Road Estates project, as described in Table 4.4-5 of the Revised Draft EIR, was then added to the forecasts described above, to produce a 2025 With Project scenario. A new figure (Figure C&R-2) has been included that presents the intersection turning movement forecasts for the 2025 With Project scenario. The intersection level of service results from this analysis are presented in Table C&R-3 on page E-82. Figure C&R-2 and Table C&R-3 have been incorporated into the Revised Draft EIR as Figure 4.4-15 and Table 4.4-9.

By the year 2025, five of the existing study intersections are projected to operate at unacceptable levels of service (LOS F) with the proposed project. At one of those intersections, the Bailey Road / SR 4 Westbound Ramps intersection, where the AM peak hour operations are expected to be LOS F, the proposed project would increase the total intersection traffic volume by less than one percent; therefore, this

intersection does not meet the standards of significance presented in the Draft EIR (pages 4.4-20 and 4.4-21).

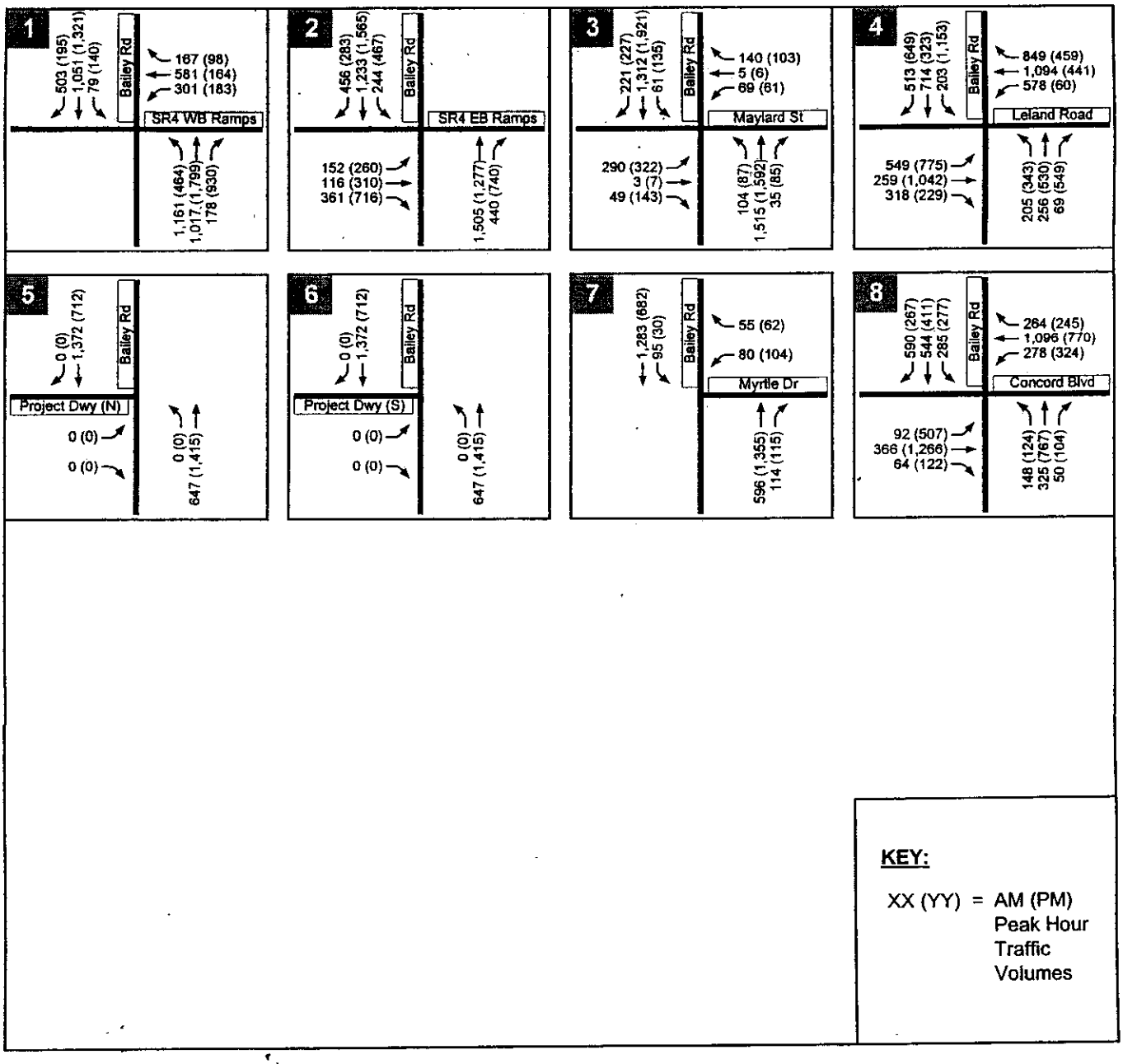
At the other four locations (Bailey Road / SR 4 Eastbound Ramps, Bailey Road / Leland Road, Bailey Road / Myrtle Drive, and Bailey Road / Concord Boulevard), the intersections would operate at unacceptable service levels with the proposed project; in most cases, the intersections would also operate unacceptably without the project. The proposed project would increase the total traffic volume at all these intersections by more than one percent. The two new intersections of the project access roads with Bailey Road would also operate at unacceptable LOS F by the year 2025. Therefore, these locations represent significant impacts.

IMPACT C&R-2: Project-generated traffic would contribute to significant adverse impacts at the Bailey Road / SR 4 Eastbound Ramps, Bailey Road /Leland Road, Bailey Road / Myrtle Drive, and Bailey Road / Concord Boulevard intersections, as well as at both intersections of the project access roads with Bailey Road.

- **MITIGATION MEASURE C&R-2A:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / SR 4 Eastbound Ramps intersection:

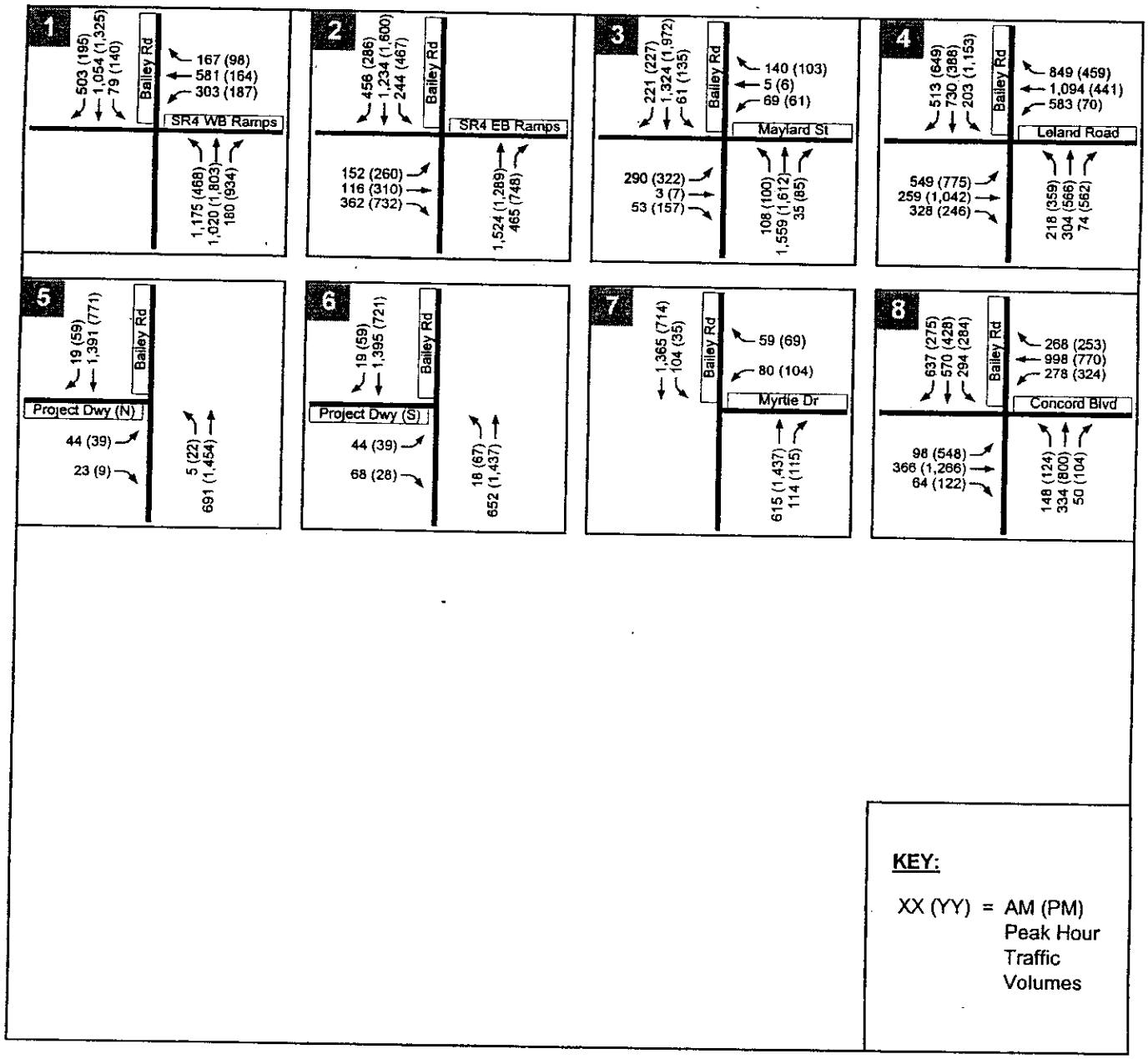
    - Provide additional eastbound right-turn capacity by widening the approach to provide an additional right-turn lane.

This impact and its corresponding mitigation measure were not identified in the Bailey Road Estates Draft EIR, but have been incorporated into the Revised Draft EIR as Impact 4.4-4 and Mitigation Measure 4.4-1. The Alves Ranch Draft EIR does identify this impact, and this mitigation measure is consistent with the findings of the Alves Ranch Draft EIR. However, as discussed in the Alves Ranch Draft EIR and on page 4.4-36 of this Revised Draft EIR, implementation of this mitigation measure is not feasible given the right-of-way constraints along the eastbound approach, where the retaining wall along the south side of the off-ramp restricts any possible widening. Therefore, the impact at the Bailey Road / SR 4 Eastbound Ramps remains **significant and unavoidable**.



Source: Fehr & Peers

Figure C&R-1 2025 No Project Peak Hour Intersection Volumes



Source: Fehr & Peers

Figure C&R-2 2025 With Project Peak Hour Intersection Volumes

Table C&R-3
INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	2025 No Project				2025 With Project				2025 With Project (Mitigated)			
	AM		PM		AM		PM		AM		PM	
	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS	V/C[1]	LOS
1. Bailey Rd. / SR 4 WB Ramps	1.31	F	0.81	D	1.32	F	0.81	D	No mitigation required.			
2. Bailey Rd. / SR 4 EB Ramps	0.73	C	1.00	E	0.73	C	1.01	F	0.65	B	0.85	D
3. Bailey Rd. / Maylard St.	0.73	C	0.80	C	0.75	C	0.81	D	No mitigation required.			
4. Bailey Rd / Leland Rd.	1.34	F	1.32	F	1.35	F	1.33	F	1.35	F[2]	1.28	F[2]
5. Bailey Rd / Project North Access	N / A		N / A		(EBL) >45	F	(EBL) >45	F	0.80	D[3]	0.83	D[3]
6. Bailey Rd / Project South Access	N / A		N / A		(EBL) >45	F	(EBL) >45	F	0.81	D[4]	0.82	D[4]
7. Bailey Rd / Myrtle Dr.	(WB) >45	F	(WB) >45	F	(WB) >45	F	(WB) >45	F	0.80	C	0.88	D
8. Bailey Rd / Concord Blvd.	1.03	F	1.39	F	1.06	F	1.44	F	0.75	C	0.88	D

Notes:

1. For signalized intersections, volume-to-capacity ratio (v/c) as calculated by the CCTALOS methodology is presented. For unsignalized intersections, delay in seconds for the worst intersection movement as calculated by the 2000 Highway Capacity Manual methodology is presented.
2. Using the CCTALOS methodology, this intersection would continue to operate at unacceptable LOS F with the proposed mitigation measure. However, based on a CORSIM simulation conducted for the Alves Ranch DEIR, the intersection would operate at an acceptable service level with the proposed improvement.
3. These LOS results would occur if the Project North Access intersection were signalized.
4. These LOS results would occur if the Project South Access intersection were signalized.

Source: Fehr & Peers Associates, September 2002.

- **MITIGATION MEASURE C&R-2B:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Leland Road intersection:

  - On the southbound approach, provide an additional right-turn lane.
  - On the westbound approach, widen the approach to minimize the offset between the approach through lanes on the west leg and the receiving lanes on the east leg, and provide a 4-foot raised median from Bailey Road to east of Willow Avenue.
  - On the eastbound approach, widen the approach to convert one left-turn lane pocket to a left-turn trap lane, add a 4-foot raised median, and a 300-foot right turn pocket.

This impact was not identified in the Bailey Road Estates Original Draft EIR, but has been incorporated into the Revised Draft EIR as Impact / Mitigation Measure 4.4-4B. The Alves Ranch Draft EIR does identify this impact, and the mitigation measures provided here are consistent with those presented in the Alves Ranch Draft EIR. As described in the Alves Ranch Draft EIR, with the implementation of these mitigation measures, the Bailey Road / Leland Road intersection would continue to operate at LOS F when analyzed using the CCTALOS methodology. However, a detailed CORSIM analysis was conducted for the Alves Ranch Draft EIR, which concluded that these mitigations would allow this intersection to operate acceptably. It is therefore expected that these mitigation measures would reduce the Bailey Road Estates project impacts at the Bailey Road / Leland Road intersection to a less-than-significant level.

With the implementation of Mitigation Measure C&R-2B, the impact at the Bailey Road / Leland Road intersection would be reduced to a **less-than-significant** level.

- **MITIGATION MEASURE C&R-2C:** The project developer shall provide a fair share contribution to signalization of the Bailey Road / Myrtle Drive intersection, the installation of an exclusive left-turn lane on the southbound Bailey Road approach, and the widening of the westbound Myrtle Drive approach to provide an exclusive left-turn lane.

As shown in Table C&R-3, with implementation of this mitigation measure, the Bailey Road / Myrtle Drive intersection would operate at acceptable service levels under 2025 With Project conditions. This mitigation measure is largely consistent with that presented in the Bailey Road Estates Draft EIR (Mitigation Measure 4.4-2A); this mitigation measure adds the installation of a separate left-turn lane on the westbound Myrtle Drive approach.

With the implementation of Mitigation Measure C&R-2C, the impact at the Bailey Road / Myrtle Drive intersection would be reduced to a **less-than-significant** level. This mitigation measure has been incorporated into the Revised Draft EIR as Mitigation Measure 4.4-4D.

Please note that the statements on page 4.4-41 of this Revised Draft EIR regarding funding of the mitigation measures located outside the City of Pittsburg also apply to Mitigation Measure C&R-2C presented here.

- **MITIGATION MEASURE C&R-2D:** The project developer shall provide a fair share contribution to the following improvements at the Bailey Road / Concord Boulevard intersection:
  - On the northbound approach, provide exclusive lanes for both the right-turn and left-turn movements, and a second through lane.
  - On the southbound approach, provide two exclusive left-turn lanes.
  - On the eastbound and westbound approaches, provide a third through lane.

As shown in Table C&R-3, with the implementation of these mitigation measures, the Bailey Road / Concord Boulevard intersection would operate at acceptable service levels under 2025 With Project conditions. This impact was identified as a significant impact in the Bailey Road Estates Draft EIR, and the Draft EIR provided for the right-turn lane and the left-turn lane on the northbound approach, and the additional left-turn lane on the southbound approach (Mitigation Measure 4.4-2B). Comments received on the Draft EIR indicate that construction of the Draft EIR mitigations would require land currently used as part of a linear parkway that parallels Bailey Road. The additional mitigation measures listed above (the additional through lanes on the eastbound, westbound, and northbound approaches) were not included in the Bailey Road Estates Draft EIR, but they are consistent with the findings of the Alves Ranch Draft EIR. However, construction of these additional mitigations is likely to be infeasible due to right-of-way constraints along Concord Boulevard.

Because the full implementation of Mitigation Measure C&R-2D is not feasible, the impact at the Bailey Road / Concord Boulevard intersection would remain **significant and unavoidable.** This mitigation measure has been incorporated into the Revised Draft EIR as Mitigation Measure 4.4-4C.

Please note that the statements on page 4.4-41 of this Revised Draft EIR regarding funding of the mitigation measures located outside the City of Pittsburg also apply to Mitigation Measure C&R-2D presented here.

10-5 The project's effect on the Delay Index TSO for the SR 4 freeway is shown in response to comment 10-2.

COMMUNITY DEVELOPMENT
P.O. Box 5007, Antioch, CA 94531-5007

February 20, 2002

Letter 11

Mr. Randy Jerome
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Re: Draft Environmental Impact Report for Bailey Road Estates

Dear Mr. Jerome:

Thank you for the opportunity to review the draft EIR for the Bailey Road Estates project which is located at the southern edge of the City of Pittsburg, west of Bailey Road and consists of 265 acres. The applicant is proposing to develop 122 acres of the site with 319 single-family residential units. The City of Antioch offers the following comments:

- Will this project require a modification to the Urban Limit Line? The last sentence of the Project Summary states that the project "is located outside the Pittsburg city limits, the City's Sphere of Influence and the County's urban limit line. While the ULL discussion on page 3-5 states, "The project site was included within the original ULL of 1990 and in the ULL revision of 1999." **11-1**

- The City of Antioch has reviewed the Drainage/Water Quality section of the Draft EIR. This project has the potential to impact down stream channels and eventually, Suisun Bay. As such, impacts to water quality as a result of the Bailey Estates project have a potential to become regionally significant. The City strongly recommends that the suggested mitigation measures contained in the Draft EIR be incorporated into a revised plan or the project conditions of approval as appropriate. **11-2**

- The City of Antioch supports Mitigation Measure 4.4-5, which requires that the applicant work with Tri Delta Transit to provide public transportation to the project site, which will reduce traffic impacts. It is also suggested that the applicant work with County Connection, which serves Concord to the south of the project. **11-3**

- Despite the conclusion in section 5.4, it is the opinion of this department that the project is growth inducing and constitutes "leap-frog" development. The City of Antioch requests that the growth inducing impacts of this development be discussed in the EIR. **11-4**

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Capital Improvement Phone (925) 779-7050 ~ Fax (925) 779-7003
Neighborhood Improvement Phone (925) 779-7042 ~ Fax (925) 779-7034
Land Development/Engineering Phone (925) 779-7035 ~ Fax (925) 779-7034

Once again, the City of Antioch thanks you for the opportunity to comment on the Draft EIR. The City also requests, should the project move forward, that notification of LAFCO hearings be sent to the Community Development Department. Should you have any questions, I can be reached at 779-7035.

Sincerely,

T. Wehrmeister

Tina Wehrmeister
Assistant Planner

cc: Joseph Brandt, Director – Community Development Dept.
Victor Carniglia, Deputy Director – Community Development Dept.

LETTER 11 RESPONSE

City of Antioch
Tina Wehrmeister, Assistant Planner
Community Development Department
February 20, 2002

11-1 The project site is located within the ULL. Page 1-1 has been modified to reflect this change. No change to the ULL will be necessary.

11-2 Comment noted regarding mitigation measures to reduce water quality impacts to downstream channels and Suisun Bay. Because the impact was identified as significant, the mitigation measures must be implemented as conditions of project approval so as to reduce the impact to a less-than-significant level.

11-3 Comment noted regarding Original Draft EIR Mitigation Measure 4.4-5. The recommendation to also work with County Connection is noted. However, it is unreasonable to expect the applicant to develop a program with this transit agency, since County Connection does not serve this area of Contra Costa County.

11-4 Comment noted regarding growth-inducing impacts. This project site has been included in the City's General Plan and the effect of including parcels outside the City limits is discussed in the General Plan EIR. It is not considered leap-frog development as its northern boundary is located immediately adjacent to the southern City limit line. Visually, the development would appear as leap-frog development because of the adjoining undeveloped parcel to the north of the project site. It is noted that the undeveloped parcel is located within the City limits. A discussion of growth-inducing impacts is provided on page 5-11 of this Revised Draft EIR.

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City Council
Bill McManigal, Mayor
Mark A. Peterson, Vice Mayor
Helen M. Allen
Laura M. Hoffmeister
Michael A. Pastrick

Lynnet Keihl, City Clerk
Thomas Wentling, City Treasurer

Edward R. James, City Manager

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MAR 1 2002
PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

February 27, 2002

Letter 12

Randy Jerome, Planning and Building Director
City of Pittsburg
Pittsburg City Hall
65 Civic Avenue
Pittsburg, CA 94565

RE: City of Concord's Comments on the Bailey Road Estates, Draft Environmental Impact Report, State Clearing House #2001022016

Dear Mr. Jerome:

The City of Concord has received the above referenced Draft Environmental Impact Report (DEIR) that describes the environmental impacts of the proposed Bailey Road Estates. The proposed project consists of 319 single-family residential units on a 122 acres site of a 265-acre parcel. The DEIR provides a description of the environmental impacts and recommended mitigation measures for the proposed project. We have reviewed this environmental document and are providing written comments that pertain only to the issues and concerns that will have a significant adverse impact on the City of Concord.

The DEIR is inadequate in its evaluation of impacts of the proposed project to traffic/transportation and the cumulative impacts of traffic from other development projects in the project area. As proposed, the mitigation measures for traffic/transportation that have been identified are infeasible and do not mitigate or address the significant impacts related to the project. The issues and concerns that we have identified with the proposal need to be addressed in your final environmental document.

e-mail: cityinfo@ci.concord.ca.us • *website:* www.ci.concord.ca.us

Transportation/Traffic

Impacts on traffic in Concord are not adequately addressed in the DEIR. The DEIR states that the proposed project causes significant traffic impacts on Bailey Road at the intersections of Concord Boulevard and Myrtle Drive. As proposed, the mitigation on Bailey Road at Concord Boulevard would widen the street by removing land from a linear parkway. At Myrtle Drive, the road would need to be widened onto the Concord Naval Weapons Station property. Other mitigation measures need to be evaluated to address these deficiencies. 12-1

Assumptions for the 2010 roadway network are not correct. The DEIR assumes that West Leland Road will be extended to Avila Road and ultimately to Willow Pass Road in Concord. The City of Concord is opposed to this connection. It is not in the City of Concord's General Plan. The connection will cause significant impacts on Willow Pass Road at both Avila Road and the nearby on/off ramps to SR 4. The assumed connection needs to be deleted, the trips reassigned on the network, and the Level-of-Service recalculated for all intersections. 12-2

There appear to be four deficiencies in the traffic analysis. The traffic generated by the proposed projects in the Pittsburg/Bay Point BART Station Area Specific Plan is not shown in Table 4.4-3, "Approved Development Trip Generation." The Final Environmental Impact Report (FEIR) has been completed for this project and the traffic trips should be included in the traffic analysis. 12-3 Secondly, the East County Traffic Model is forecasting fewer left turns in 2010 for traffic turning from Concord Boulevard onto Bailey Road and going towards Pittsburg then the number of left turns for the same movement shown Figure 4.4-6, "Year 2005 Base Case (Without Project) PM Peak Hour." On what basis is there a decrease in the number of left turns? This does not appear to be a reasonable assumption. In addition, the forecasted number of turns would require a left turn storage lane of nearly 500-feet. A lane of this length would conflict with other nearby turn lanes on Concord Boulevard. Because of the high demand for left turns, that traffic movement will still operate at an unacceptable LOS. 12-4 The third deficiency, Impact 4.4-6 discusses the possibility that San Marco Boulevard could be extended to access Bailey Road via the project's internal streets. 12-5 The increase in traffic on Bailey Road intersections caused by the roadway extension has not been analyzed. Lastly, there is no analysis on the impacts of increased traffic on Bailey Road through Concord. 12-6 The section of Bailey Road adjacent to the Concord Naval Weapons Station is in a rural setting. The roadway is very narrow and is windy through a hilly section.

CEQA and the Contra Costa Transportation Improvement and Growth Management Program, a.k.a. Measure C, require developments that cause significant traffic impacts to pay for the cost of mitigating those impacts. Except for a few in-fill housing developments, the City of Concord is built out near the intersections of Concord Boulevard and Bailey Road and Myrtle Drive and Bailey Road. These developments will have minimal impact to the aforementioned intersections. The City of Clayton is also 12-7

nearly built out and has no foreseeable projects that will impact these intersections. It is clear that proposed developments in Pittsburg, such as Bailey Estates and Alves Ranch, and the proposed projects associated with the Pittsburg/Bay Point BART Station Area Specific Plan, which is sponsored by Pittsburg and Contra Costa County, create the traffic deficiencies at the two intersections in Concord. An appropriate mitigation would be for Pittsburg and Contra Costa County to develop a reimbursement agreement that requires the first development that begins construction to build the required mitigations in Concord and for that project to be reimbursed by the other projects. **12-7**

The City of Concord has not been contacted to discuss any proposed mitigation measures. The City of Pittsburg and the project proponent should discuss the proposed mitigation measures with Concord before responding to comments on the DEIR. **12-8**

Cumulative Impacts

The DEIR is inadequate in its analysis of the cumulative impacts of the proposed project and other foreseeable development in the project area. The DEIR needs to identify all development projects in the project area that are pending and anticipated. This would include an analysis of the cumulative impacts of the projects that include Alves Ranch Project and Pittsburg/Bay Point BART Station Specific Plan. Section 15130 of the CEQA Guidelines states that an EIR must discuss cumulative impacts when they are significant. The CEQA guidelines define cumulative impacts as *"Two or more individual effects which, when considered together or which compound or increase other environmental impacts"* (Section 15355). In the case of the proposed project, there would be significant impacts that would result from the project in combination with those from other developments. They would contribute to cumulative impacts of traffic. The Final EIR needs to contain a complete analysis on the cumulative impacts on traffic in the project area. **12-9**

Final Environmental Impact Report

The Final EIR needs to provide a sufficient level of detailed analysis that would provide decision-makers with the information to make an intelligent assessment of the environmental consequences of the proposed project. CEQA mandates that agencies not approve projects that have significant adverse effects when feasible alternatives or mitigation measures can lessen such impacts. The City of Pittsburg, acting as the lead agency, is responsible for identifying and providing for feasible mitigation measures under its own jurisdiction. The proposed mitigation measures for traffic/circulation and cumulative impacts are inadequate. The Final EIR needs to address the concerns and significant impacts that the City of Concord has identified. **12-10**

Thank you for the opportunity to review and comment on the DEIR. We look forward to receiving the final EIR, including responses to our comments. If you have any questions regarding these comments, or would like to discuss them further, please contact John Templeton, Transportation Manager at 671-3129 or Phillip Woods, Principal Planner at 671-3284.

Very truly yours,

Edward R. James
City Manager

cc: Mayor and Members of the Concord City Council
Board of Supervisors, Contra Costa County
Board of Directors, Bay Area Rapid Transit District
Mayor and Members of the Council, City of Pittsburg
Will Casey, City Manager, City of Pittsburg
Wagstaff and Associates
Mills Associates
Lydia Du Borg, Assistant City Manager, City of Concord
Jim Forsberg, Director of Planning and Economic Development, City of Concord
Deborah Raines, Planning Manager, City of Concord
Mike Vogan, Director of Public Works – Maintenance Services, City of Concord
Bob McCleary, Executive Director of Contra Costa Transportation Authority
Mark Boehme, Assistant City Attorney, City of Concord
TRANSPAC
Jill Bennet

LETTER 12 RESPONSE

City of Concord
Edward R. James, City Manager
February 27, 2002

12-1 Refer to response to comment 10-4 for a discussion of cumulative impacts and mitigation measures. City staff has met with Concord to discuss the proposed improvements to the Bailey Road/Myrtle Drive intersection.

12-2 The extension of West Leland Road to Avila Road and Willow Pass Road is in the City of Pittsburg's General Plan. The Bailey Road Estates Draft EIR did not analyze the SR 4 on- and off-ramps at San Marco Boulevard/Willow Pass Road, which would be affected by the extension of West Leland Road to San Marco Boulevard and beyond. The Alves Ranch Draft EIR did analyze those ramp intersections, and did not identify a significant impact at those locations from the traffic generated by the Alves Ranch project. The amount of peak hour traffic generated by the Bailey Road Estates project that could potentially affect those locations (as shown in Figure 4.4-12 of the Draft EIR) is less than the Alves Ranch project traffic analyzed in the Alves Ranch Draft EIR.

12-3 Refer to response to comment 10-4 for a description of the future year analysis conducted here and its consideration of the Pittsburg/Bay Point BART Station Area Specific Plan.

12-4 Refer to response to comment 10-4 for a description of the future year analysis conducted here. The projected volumes for the 2025 analysis are equal to or higher than the 2005 or 2010 volumes presented in the Draft EIR. In the specific case of the PM peak hour eastbound left-turn volumes at Bailey Road / Concord Boulevard mentioned in the comment, the 2005 Without Project forecasts presented in the Draft EIR (Figure 4.4-6) showed 475 vehicles, and the 2025 No Project forecasts presented here (Figure C&R-2) show 507 vehicles.

12-5 The travel demand model used to prepare the 2025 forecasts described in response to comment 10-4 includes the extension of San Marco Boulevard to Bailey Road. Therefore, the traffic effects of that extension on Bailey Road are accounted for in the model forecasts.

12-6 Refer to response to comment 7-5.

12-7 The two intersections within Concord (Bailey Road / Myrtle Drive and Bailey Road / Concord Boulevard) were analyzed in the Original Draft EIR, in this Response to Comments under comment 10-4, and in this Revised Draft EIR. Appropriate mitigation comment noted.

12-8 The City has contacted and met with the City of Concord regarding mitigation measures for this project in the City of Concord.

12-9 Refer to response to comment 10-4 for a description of the future year analysis conducted here and its consideration of the Pittsburg/Bay Point BART Station Area Specific Plan. The year 2025 cumulative analysis presented here is directly based on the adopted Pittsburg General Plan and adopted regional growth forecasts. This information meets California Environmental Quality Act (CEQA) requirements for cumulative transportation analysis.

12-10 Refer to response to comment 10-4 for a discussion of cumulative impacts and mitigation measures.

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Letter 13

March 14, 2002

RECEIVED
MAR 15 2002
PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

VIA OVERNIGHT DELIVERY

Randy Jerome
City of Pittsburg
Community Development Department
65 Civic Avenue
Pittsburg, California 94565

Re: Bailey Road Estates Draft Environmental Impact Report ("DEIR")

Dear Mr. Jerome:

Please find enclosed a redlined version of the DEIR Summary of Significant Impacts and Mitigation Measures highlighting the revisions proposed by the applicant, Bailey Estates LLC. These revisions only affect the discussions of mitigation measures. Additionally, we suggest these same proposed revisions be made to the relevant discussion sections of the DEIR.

Public Resources Code Section 21002 requires agencies to adopt feasible mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts. To effectuate this requirements, an environmental impact report ("EIR") must set forth mitigation measures that decision makers can adopt at the findings stage of the process (Pub. Resources Code, Section 2100, subd. (b)(3); CEQA Guidelines, Sections 15126, subd. (e), 15126.4 emphasis added). However, the mere inclusion of mitigation measures within an EIR does not, by itself, bind the lead agency to later adopt and carry out such measures. Native Sun/Lyon Communities v. City of Escondido (4th Dist. 1993) 15 Cal.App.4th 892. **13-1**

For this reason, use of language requiring affirmative obligations of the City of Pittsburg and the applicant have the potential to cause confusion at the project approval stage. Often, due to use of the words "shall" and "must" within an EIR, lead agencies are hesitant to alter a mitigation measure whatsoever, taking away its discretion to increase or decrease the breadth of the subject measure, regardless of the significance or insignificance, or the necessity to do so.

Some mitigation discussions within the DEIR already state the measures for what they are: actions which, when completed, would mitigate the significant impact. The proposed revisions to the remainder would make these discussions and summary statements internally consistent. 13-1

Please do not hesitate to contact me should you have any questions regarding these proposed recommendations or the matter generally.

Very truly yours,

Kristen Thall Peters

Kristen Thall Peters

cc: John Stremel
KTP:hs

WC\877430.1

WordPerfect Document Compare Summary

Original document: ::ODMA\MHODMA\WC;877307;1
Revised document: ::ODMA\MHODMA\WC;877307;2
Deletions are shown with the following attributes and color:
~~Strikeout~~, Blue RGB(0,0,255).
Deleted text is shown as full text.
Insertions are shown with the following attributes and color:
Double Underline, Redline, Red RGB(255,0,0).

The document was marked with 283 Deletions, 282 Insertions, 0 Moves.

LETTER 13 RESPONSE

Cooper, White & Cooper, LLP
Attorneys at Law
Kristen Thall Peters
March 14, 2002

13-1 We would disagree with many of the commentor's recommended changes. The changes would result in measures that are grammatically incorrect and provide some confusion.

Greenbelt Alliance

Letter 14

RECEIVED
MAR 2 1 2002
PLANNING DIVISION
COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

Mr. Randy Jerome
City of Pittsburg
Department of Planning and Building
Civic Center
65 Civic Avenue
Pittsburg CA 94565

Subject: Comments on the Draft Environmental Impact Report for Bailey Road Estates

Dear Mr. Jerome,

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the proposed Bailey Road Estates.

Greenbelt Alliance is the Bay Area's leading land conservation and urban planning non-profit. Founded in 1958, Greenbelt is dedicated to protecting the region's Greenbelt of open space and making Bay Area communities a better place to live. Over the years, Greenbelt has helped save more than 600,000 acres of Greenbelt lands and helped generate over $500 million to acquire new parklands and other open space.

Under the California Environmental Quality Act ("CEQA," Public Resources Code § 21000 et seq.), the DEIR must provide enough information about a project to allow decision-makers to assess its full environmental impacts. We believe that the Bailey Estates project would have a very negative impact on the City of Pittsburg as well as Contra Costa County as a whole, but the DEIR greatly underestimates how it would damage Pittsburg's quality of life. The DEIR is misleading and fails to live up to the mandate of CEQA. Greenbelt Alliance recommends the project be denied. If the City elects to continue considering the Bailey Road Estates project, the DEIR must be thoroughly revised and recirculated for additional comment.

This project would result in severe impacts to the City in a number of important areas discussed below.

1. The Project would have a significant impact on regional traffic and air quality.

Clearly, the addition of 3,050 trips a day (table 4.4-5) to Bailey Rd, with a majority of those trips ending up on Hwy 4 would further burden the already at capacity highway. In addition, the air pollution generated by those car trips would worsen air quality in Pittsburg as well as in communities along the Hwy 4 corridor.

14-1

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info@greenbelt.org • www.greenbelt.org

Disturbingly, no attempt has been made to curtail the number of car trips generated by the Project. There are no services, and no businesses within walking distance, and further, there are not even any sidewalks along Bailey Rd., making it virtually impossible for pedestrians to leave the development. Additionally, there is no public transit along Bailey Rd (p.4.4-2), and no guarantee that Tri-Delta transit will serve the route in the future. This is entirely unacceptable. Contra Costa County, and particularly the Hwy 4 corridor already have severe congestion issues. The location of this proposed development, miles away from services and transportation options, forcing every trip out of the development to be in a motorized vehicle, would further strain our already overburdened roadways and worsen our air quality. 14-1

2. **The Project would convert about 122 acres from agricultural land to urban uses, and would have growth inducing impacts on the agricultural and other areas adjacent to the Project.**

In addition to paving over 122 acres of agricultural land, the Project would threaten the economic viability of ranching in the region as a whole. The fences proposed as mitigation would do little to minimize the effects building 319 single-family homes in an area surrounded by ranchlands. The DEIR claims that the Project does not create growth inducing impacts (p5.5), but this type of development, miles away from services and not bordered by development on any side is a classic example of 'leapfrog development' which fragments open space and puts growth pressures on rural areas. The future of the Concord Naval Weapons Station is uncertain, but developing along its borders and extending water and sewer services to the edge of CNWS will clearly put pressure to develop this area instead of preserving it as open space or other non-residential uses. Also, the fact that there are blast zone easements in place in the areas adjacent to the Project does not protect them from growth. As the DEIR notes (p. 4.1-1), there are already plans underway to eliminate those easements. 14-2

3. **The Project clearly poses a significant danger to the public safety of future residents.**

Not only is the development proposed to be built in an area of high fire danger (impact 4.1-5, p. 4.1-3), but it would be located outside of the 1.5 mile radius for either of the two nearest fire stations (impact 4.7-1, p. 4.7-10). In fact, the DEIR estimates that fire service response would take 9-10 minutes (p.4.7-10), twice as long as the specified 5 minute response time specified in the General Plan. This deadly combination of high fire hazard and long fire service response time would create an extremely unsafe development for future residents. The mitigation measures proposed in the DEIR do not do enough to make this a safe development. The bottom line is that building in grassy hillsides miles away from fire services is putting the safety of future residents at risk. 14-3

4. **The Project would have a serious, detrimental effect on the wildlife habitat and special status species in the area.**

Despite the mitigation measures proposed (p.4.8-14-4.8-15) the Project would still destroy wetlands (p. 4.8-13). It would also impact special status species, such as California tiger salamander, California red-legged frog, and the San Joaquin kit fox (p. 4.8-11). The City should wait until after the necessary state and federal permits for those species are acquired before considering approving this project. In addition, the Project would seriously hamper the movement of wildlife through the site and the 5 –foot-wide cattle crossing would not make up for the barrier created by the development. 14-4

5. The Project does not promote the City's planning goal of creating a jobs-housing balance.

The addition of 319 units with no employment opportunities beyond the construction of the development will clearly worsen the jobs-housing balance. 14-5

Overall, the Bailey Road Estates project would have devastating impacts on the quality of life in Pittsburg. Given these impacts and the numerous inadequacies of the DEIR, we urge the City to deny the project. 14-6

Once again, thank you for the opportunity to be involved in the planning process. Please feel free to call me with any questions, comments, etc.

Sincerely,

Elinor Buchen
East Bay Outreach Coordinator

LETTER 14 RESPONSE

Greenbelt Alliance
Elinor Buchen
East Bay Outreach Coordinator
March 21, 2002

14-1 Pedestrian and transit circulation issues were discussed in the Revised Draft EIR on pages 4.4-2 and 4.4-44. As discussed in that section, the City may elect to have the project provide a pedestrian walkway along the site frontage on Bailey Road. The Draft EIR also requires that the project site plan allow for internal transit circulation

The impacts of traffic generated by the proposed project on the regional roadway network, including the SR 4 freeway, have been analyzed in the Revised Draft EIR and in this Response to Comments in a manner consistent with CEQA requirements. Significant impacts have been identified, and mitigations have been proposed, where feasible.

Traffic-related regional emissions are discussed on page 4.6-9 of the Revised Draft EIR.

14-2 The provision of double fencing is a practical method for preventing cattle from wandering into the subdivision. The inner fence, which is usually made of wire, fends off the cattle from rubbing against the residential wooden fences. Conversely, double fencing helps to reduce the tendency for homeowners or their pets from wandering into the rangeland.

Refer to response to comment 11-4 regarding the discussion of growth-inducing impacts.

14-3 Comment noted regarding fire safety. Mitigation measures recommended on pages 4.7-13 and 4.7-14 in the Revised Draft EIR are specifically recommended by the Fire District. Additional mitigation measures have been added to supplement those of the Fire District. The City's General Plan (Policy 11-P-28) encourages the City to work with the Fire District to obtain a new fire station or relocate existing fire station 86 to a site south of SR 4. Depending upon the ultimate location, the project would be either partially or completely within the 1.5-mile response radius.

14-4 Comment noted. The Draft EIR provides a discussion of each of the issues raised by the commentor, and provides mitigation to address potential impacts on wetlands,

special-status species, and wildlife habitat connectivity. As discussed under Impact 4.8-4, the project would obstruct opportunities for wildlife movement across the site and the surrounding undeveloped lands of the southwest hills of Pittsburg. Mitigation Measure 4.8-4 was recommended to provide restrictions on development to protect and restore the important wetland complex and provide for continued wildlife habitat connectivity through the southwest hills. This includes preservation of the northern drainage as a wildlife movement corridor and restrictions on development to provide a minimum 100-foot-wide upland corridor for wildlife south of the site and north of the chain-link fence along the Concord Naval Weapons Station property boundary. Retention of the cattle crossing under Bailey Road was one of six specific provisions in Mitigation Measure 4.8-4.

14-5 The proposed development was considered when the City assessed the jobs/housing balance as a part of the General Plan EIR.

14-6 This comment is a statement of opinion regarding the status of the project and does not relate to the adequacy of the EIR.

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COMMUNITY DEVELOPMENT
CITY OF PITTSBURG

February 28, 2002

VIA FACSIMILE AND U.S. MAIL

Letter 15

Randy Jerome
Planning and Building Director
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Re: Alves Ranch EIR, Baily Estates EIR;
Our file 5100.1.020.0

Dear Mr. Jerome:

We represent the Mt. Diablo Unified School District. This letter is to confirm the contents of your telephone conversation yesterday with Ed Puchi of our office regarding the Bailey Road Estates and Alves Ranch development project EIRs.

In that conversation, you confirmed that the deadline to provide input and comment on the Draft EIRs for each of those projects is actually Friday, March 8, 2002 instead of March 4 as originally indicated on the City's notices inviting public comment. Accordingly, the District will be submitting its anticipated comments in accordance with that revised deadline. Please contact us immediately if our understanding in this regard is not correct. **15-1**

Thank you for taking time out of your busy day to contact our office and provide us with the updated information. Please do not hesitate to contact us if you have any questions.

Very truly yours,

MILLER BROWN & DANNIS

Peter Sturges

PS/dl

cc: Ed Puchi Jr.

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LETTER 15 RESPONSE

Miller, Brown & Dannis, Attorneys at Law
(Representing Mt. Diablo Unified School District)
Peter Sturges
February 28, 2002

15-1 These comments pertain to the public review period and no further response is necessary.

MILLER BROWN & DANNIS
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PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

March 15, 2002

Letter 16

VIA HAND DELIVERY

Randy Jerome
Planning & Building Director
City of Pittsburg
Community Development Department
65 Civic Avenue
Pittsburg, CA 94565

Re: Mt. Diablo Unified School District,
Bailey Road Estates Project Draft EIR;
Our file no. 5100.10091

Dear Mr. Jerome:

Our firm represents Mt. Diablo Unified School District (District). This letter contains the District's comments concerning the Draft Environmental Impact Report (EIR) for the Bailey Road Estates Project (the "Project"). The Project area is within District boundaries and the District will be responsible for housing students the Project generates, as well as students generated by other new development in the West Pittsburg area.

1. **The Draft EIR Fails to Reflect Accurately the Impact of the Project and Cumulative Development on School Capacity**

Section 4.7 of the EIR describes the impact of the Project on the schools of the District that will need to serve students who will reside in the Project. (EIR, § 4.7 "Public Services/Utilities Impact," pp. 4.7-2 to 4.7-3 and pp. 4.7-12 to 4.7-13.) It also provides capacity and enrollment information for the schools that currently serve the Project area and surrounding areas. (EIR, pp. 4.7-2 through 4.7-3.) **16-1**

The EIR concludes the Project will generate 239 new students for District schools. (See, Draft EIR, § 4.7, "Public Services/Utilities, Impact," § 4.7-4, and Table 4.7-1, "School Capacities.") However, the EIR mentions later on that the *cumulative* impact of the Project is 1,628 students, a far higher figure. (EIR, p. 5-4 and Table 5-1.)

The District has performed its own evaluation of the impact of new development on schools. (A copy of that study, entitled the Final Report of the Mt. Diablo Unified School District Facilities Task Force, August 1, 2001 (Report), is enclosed as Exhibit A.) The Report indicates that the average number of students generated per single family residence is .444, while affordable multiple family units generate .755 students and all other multifamily housing generates .168 students per unit. In addition, the report indicates the number of units to be built in the project is different from the number provided in the EIR. For this analysis, the number of units indicated in the EIR will be used. The numbers in the District's Report would need to be adjusted for this change in number of housing units.

16-1

2. **Statutory Developer Fees Are Not Sufficient to Cover the Cost of Constructing New School Facilities**

The EIR states that the Project will create potentially significant impacts on Project-area schools, and that the District will need to construct new schools to meet the anticipated increase in enrollment. (EIR, § 4.7, "Public Services/Utilities, Impact," p. 4.7-13, ¶ 6.) In spite of this, the EIR summarily concludes that the City does not have to address such an impact "given the location of the Project at the edge of the City limits and the topographic constraints, both on- and off- site." (*Ibid.*) The EIR then states that the only mitigation necessary for such an impact is for the developer to pay "school impact fees" to help offset the cost of new construction. (*Ibid.*)

16-2

The City and community should be aware of the real shortfall for the District and the community which must support the construction of schools to house students generated by new development when school impact fees are not sufficient to fund the construction of adequate facilities. With regard to the Project, that shortfall may be half of the cost of providing school facilities for children who will live within the Project. The citizens of the District and the state will need to fund that shortfall through local and state bond measures, or the quality of education available to children within the District will be impaired.

Utilizing the numbers of single and multi family units in the EIR and the District's generation rates, the Project will generate 141.6 students. The cost of construction of school facilities to house those students will be as follows:

	# Students	Facilities cost/ Student[1/]	Total Facilities Cost
Elementary	66.4	21,884	1,453,098
Middle	36.7	29,066	1,066,722
High	38.5	34,464	1,326,864
Total	141.6		3,846,684

16-2

Assuming that the statutory maximum level of developer fees are paid, the fees anticipated to be generated are as follows:

# of Units	Ave. Sq. Ft. /Unit	# Sq. Ft.	X	$/Sq. Ft.	Total Fees
319	2,500	797,500		$2.05	$1,634,875

The total shortfall in funding for the cost of new facilities would be $2,211,809 ($3,846,684 less $1,634,875).[2/]

The EIR fails to take into account the full impacts the Project will have on District schools, nor does state law currently allow lead agencies to require full mitigation of the impact.

[1/]Developer Fee Justification Study for Mt. Diablo Unified School District, July 30,2001, Prepared by Jack Schreder & Associates, attached hereto as Exhibit B.

[2/]The District currently has an agreement with the Bailey Roads Estates Project Developer, Bailey Estates LLC, placing limits on maximum developer fees in certain circumstances. Depending on the applicability of that agreement to this development, which is based on a varying set of factors such as geographic location, cost of living adjustments, time periods, etc., the per square foot fee could go as low as $1.20 per square foot. In that case, the total shortfall in funding for the cost of new facilities could be $2,889,684 ($3,864,684 less 957,000).

Thank you for your attention to this matter.

Very truly yours,

Miller Brown & Dannis

Peter Sturges

PS:dl

Enclosure

cc: Mt. Diablo Unified School District

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LETTER 16 RESPONSE

Miller, Brown & Dannis, Attorneys at Law
(Representing Mt. Diablo Unified School District)
Peter Sturges
March 15, 2002

16-1 Based upon the generation rate quoted in the commentor's letter, .444 students per single-family residence, the project would generate 142 students, 97 fewer than stated in the Draft EIR. The number of units identified in the EIR is the correct number as established in the application before the City. The development plan was reduced from the original submittal to reflect the plan shown in the Draft EIR.

16-2 It is acknowledged that the project would create significant impacts on existing school facilities and that new schools need to be built to accommodate projected enrollment within the City of Pittsburg. It is also acknowledged that the fees generated by the project would be insufficient for the District to purchase land and build a new school facility.

SEECON
Financial & Construction Co., Inc.

4021 Port Chicago Highway • P.O. Box 4113
Concord, California 94524-4113
(925) 671-7711

February 12, 2002

Chairman Thaddeus Holmes
and Members of the Planning Commission
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Letter 17

Re: Bailey Road Estates Draft Environmental Impact Report

Dear Chairman Holmes and Members of the Planning Commission:

This letter is submitted on behalf of Seecon Financial & Construction Co., Inc. and its affiliated entities (collectively "Seecon") and consists of Seecon's written comments on the draft Environmental Impact Report ("DEIR") for the Bailey Road Estates Project which is scheduled to be considered by you at your meeting of February 12, 2002. Seecon owns the property which borders the Bailey Road Estates site on the west and south side.

For your convenience, our comments are provided below by subject matter:

Alternatives

1. The proposed Bypass Road Alignment Alternative[1] is not consistent with the recently adopted *Pittsburg 2020* General Plan update and is environmentally inferior to other road alignment alternatives.

The General Plan clearly provides direction for the planning, design and improvement of an acceptable, safe arterial routing. The various maps and figures in the General Plan indicate the "general" location of proposed uses, including roads. Furthermore, the General Plan anticipated the need for determining a more precise alignment for the San Marco Boulevard (Bailey Bypass) arterial in Policy 7-P-18 and requires its construction to conform to this policy, as follows: 17-1

> *"Approve construction of the proposed San Marco Boulevard (Bailey Bypass). Ensure preparation of a feasibility and environmental impact study to determine the precise alignment, costs, mitigation measures, and impacts on adjacent uses. Consider topographic and geologic constraints, and projected traffic generation rates."*

[1] Page 6-4 and Figure 6.3-1 (Page 6-5).

The alignment of the Bailey Bypass as shown in the Bailey Road Estates DEIR (Page 6-5) is located in steep, unstable terrain. Moreover, its intersection with Bailey Road likely traverses significant wetland and species habitat areas. The construction of an arterial street in this location would require excessive cut-and-fill (up to 260 feet deep cut), landslide repairs, and remedial grading and buttressing to achieve road grades not exceeding 9 percent as required by City standards for such arterials. A 260-foot deep cut would have side slopes almost 800 feet wide and require removal of over 8,000 cubic yards of soil per lineal foot of roadway. Furthermore, the intersection shown is on a curved portion of Bailey Road which would be unsafe due to poor visibility for vehicles approaching the intersection in all directions. **17-1**

The Bailey Bypass is designated as a minor arterial in the Pittsburg General Plan and is a planned transportation improvement in the City's 1997 Traffic Mitigation Fee Study. "Minor arterials", as defined in the General Plan, are intended to provide balance between mobility and access and carry a mix of local and regional traffic, providing circulation between neighborhoods, activity centers, and highways and other regional routes. The traffic volume of a minor arterial is considered "moderate to high" with 15,000-40,000 vehicles per day.[3] Given the projected volume of traffic on the Bailey Bypass, the proposed alignment is not safe, efficient or cost-effective.

Sufficient information exists to indicate that a safer, less-costly alignment that would cause much less environmental impact can be located south of the proposed alignment. Attached hereto is a map prepared by civil engineer, Isakson & Associates, depicting an environmentally superior layout of the road which avoids the steep, unstable terrain of the proposed layout and therefore provides a safer, more-efficient Bypass for vehicle traffic. It is important that you adopt Mitigation Measure 4.4-6 on page 4.4-34 which is consistent with building the Bailey Bypass in its feasible and proper location. **17-2**

Traffic

1. The assumption contained in the third bullet-point under "Year 2010" on page 4.4-12 is not correct for the reasons cited above.

The northerly location of the arterial's T-intersection with Bailey Road is not consistent with the General Plan and it is environmentally inferior. In addition, the DEIR fails to identify the proposed location of the Bypass under this section therefore making it difficult to distinguish the presumed location of the Bypass under this section from the Bypass Alignment Alternative discussed in Section 6.0 of the DEIR. **17-3**

2. The discussion of the San Marco Boulevard connection to the project street system on page 4.4-33 is incomplete and misleading. **17-4**

[3] Table 7-2, *Pittsburg 2020: A Vision for the 21st Century*

This paragraph should also include the discussion of the alternative of a continuous routing of San Marco Boulevard through either the project as proposed or the proposed alternative project design. This alternative would eliminate the four 90-degree turns, as proposed in Mitigation Measure 4.4-6.. 17-4

Water

1. The DEIR incorrectly refers the reader to Figure 2-3 for the proposed location of the water storage tank. The correct citation should be to Figure 4.2-6. With respect to Policy 11-P-5 cited on page 4.7-8, please clarify that CCWD does not get involved in water pressure zones in the City. 17-5

Wastewater Service

1. There should be a thorough analysis of the impacts on the existing collection system which the DEIR says "will not have adequate capacity" to serve the project. Bailey Road Estates should be studied to determine required mitigation and upsizing of the existing sewer main, pump station and force main which transmit wastewater flow to the sewage treatment plant. Owners of properties in the vicinity of the Pittsburg BART Station were assessed for wastewater improvements north of West Leland Road through the Pittsburg West Assessment District 1971-1, approved by the City Engineer on April 25, 1973. Those owners have vested rights to all existing capacity in the existing wastewater system. 17-6

Visual Quality

1. With respect to Mitigation Measure 4.10-4, City policy has been that new water reservoirs be placed underground to lessen their visual impact. Also, pump stations are housed in buildings which are designed with a residential appearance similar to the nearby homes. 17-7

Schools

1. The school fee is currently $2.06/square foot, not $1.65/square foot. 17-8

Land Use

1.The DEIR, in its Setting section on page 4.1-1 states that the property to the west and south of the Project is owned by the Concord Naval Weapons Station that is set aside as a blast safety zone easement. This is incorrect. The property located immediately west of the Project is owned by a Seeno-affiliated entity, Seecon Financial & Construction Co., Inc. 17-9

Appendix A

Assessor's Maps indicate the site to include property to the west and south which is owned by others, including Seecon. This should be clarified.

Appendix B

A new Mitigation Measure 4.10-6 should be included requiring water reservoirs to be underground and water pump stations to be architecturally compatible with nearby homes. 17-10

We appreciate the opportunity to comment on this Draft EIR and reserve the right to submit additional comments prior to the expiration of the public comment period.

Sincerely,

Richard D. Sestero
Project Manager

RDS:ldj

IMPACT 4.4-6: The project's proposed internal street layout could not safely accommodate projected traffic levels should San Marco Boulevard access Bailey Road via use of the project's internal streets.

- **MITIGATION MEASURE 4.4-6:** If the City of Pittsburg determines that San Marco Boulevard should be aligned through the Bailey Road Estates site, the project site plan should be revised to provide a direct alignment of San Marco Boulevard through the site to a "T" intersection with Bailey Road. No residential units should front on this roadway. In addition, the number of project residential roadway connections to San Marco Boulevard should be minimized, ideally no more than one connection each to the north and south sections of the site. Left- and right-turn deceleration/acceleration lanes should be provided on the San Marco Boulevard approaches to all project access roadways. The roadway would also need to be wide enough to provide Class II bicycle lanes as designated in the Regional Transportation Planning Committee's Bicycle Action Plan.

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[1] Paul Reinders, City of Pittsburg Community Development Department, Engineering Division, personal communication, March 2001.

[2] John Templeton, City of Concord Transportation Manager, personal communication, March 2001.

[3] *Pittsburg General Plan Update: Existing Conditions and Planning Issues*, June 1998.

[4] City of Pittsburg, *Pittsburg 2020: A Vision for the 21st Century, Pittsburg General Plan*, adopted November 16, 2001, Table 7-1.

[5] Caltrans *Highway Design Manual*, July 1, 1995.

Southwest Hills

Goals: Southwest Hills

2-G-31 Maintain the general character of the natural topography and major ridgelines in the Southwest Hills.

2-G-32 Encourage development of higher-end, low-density residential neighborhoods, that are well integrated with the natural setting.

Policies: Southwest Hills

2-P-85 Ensure extension of West Leland Road and San Marco Boulevard through the area, as shown on the General Plan Diagram, as a condition of any new approval in the area.

However, because the General Plan Diagram is a general representation of proposed development patterns, the alignment of West Leland Road and San Marco Boulevard is subject to variation as needed to serve planned and approved residential neighborhoods and mitigate environmental impacts.

2-P-86 Work with project developers to ensure that new residential neighborhoods and business commercial complexes built along West Leland Road provide transit amenities (such as pedestrian paths, bus shelters, bicycle racks) and convenient access to the Pittsburg/Bay Point BART Station.

2-P-87 Ensure that all proposed residential development is set back from the edge of State Route 4 to mitigate visual and noise impacts.

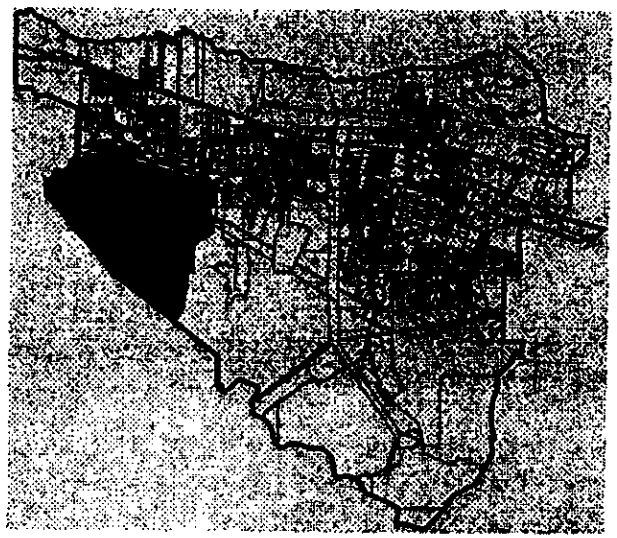
2-P-88 Allow development surrounding the West Leland Road/San Marco Boulevard intersection (San Marco project) in accordance with entitled approvals. If any aspect of the approval is sought to be changed:

- *Allow a maximum of 1,400 Hillside Low and Low Density units, and 1,500 Medium and High Density units, with additional residential and commercial development permitted in the mixed use San Marco Village;*

Table 2-17
General Plan Land Use Distribution, Southwest Hills

Land Use	*Acreage*
Hillside Low Density Residential	374
Low Density Residential	342
Medium Density Residential	14
High Density Residential	178
Community Commercial	35
Business Commercial	56
Industrial	2
Parks	48
Open Space	1,191
Public / Institutional	26
Grand Total	**2,267**

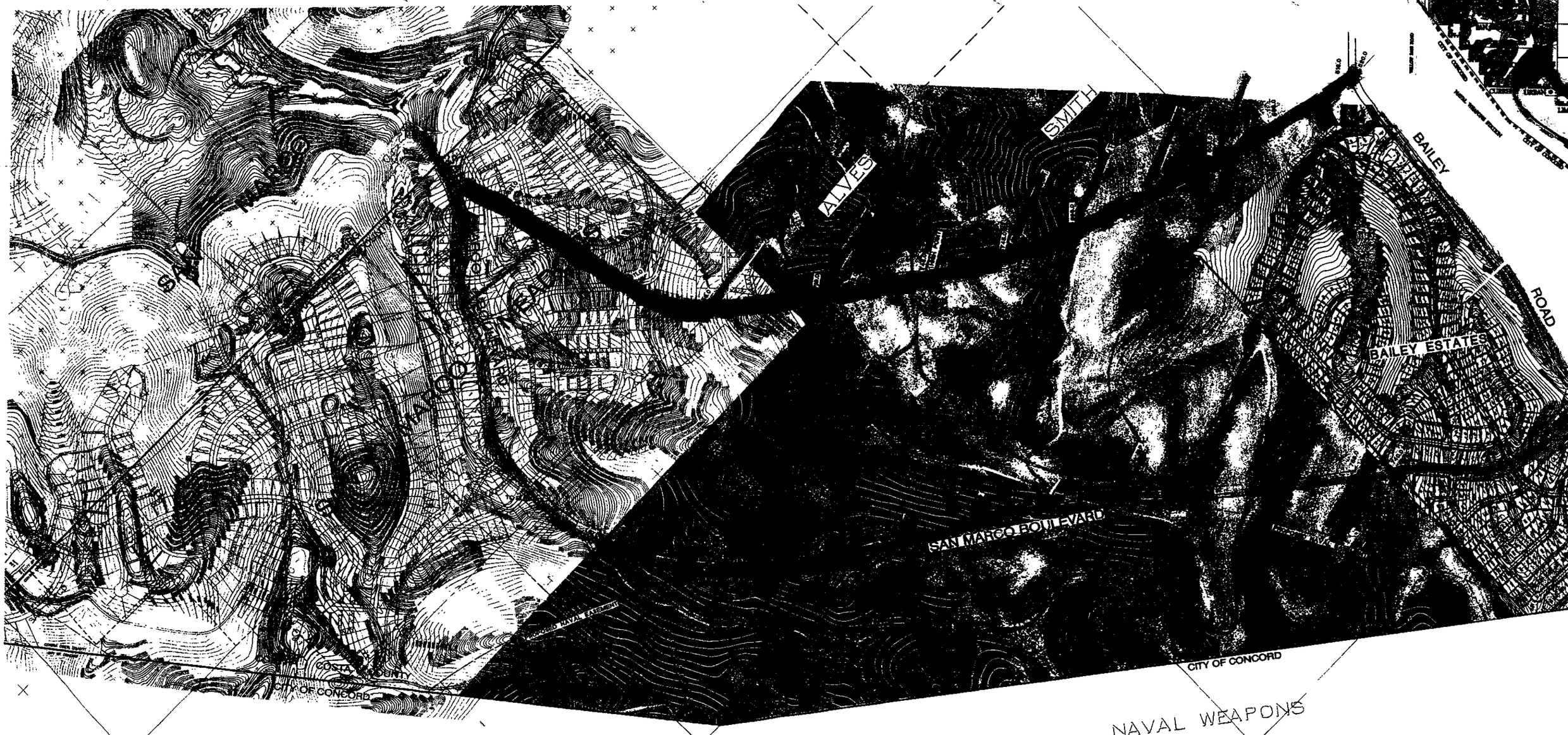
Source: Dyett & Bhatia, 2000.



SAN MARCO BOULEVARD

HIGHWAY 4 TO BAILEY ROAD

1" = 200'



LETTER 17 RESPONSE

Seecon Financial & Construction Co., Inc.
Richard D. Sestero, Project Manager
February 12, 2002

17-1 Comments noted regarding the alignment of the Bailey Road Bypass. However, the commentor should be aware that the route as shown in the Draft EIR was suggested in order to stay away from the Naval Weapons Station blast zone easement. Since preparation of the Draft EIR, the applicant has agreed that the by-pass road could extend through the project site, entering the site at the western boundary and exiting the site through the southerly Bailey Road access. The southerly entrance road would dead end at the western property line until such time as the by-pass road is constructed and the roadway is connected. The alternate alignment of the Bailey Road Bypass through Bailey Estates is discussed in Section 6.3

17-2 Refer to response to comment 17-1.

17-3 The third bullet under the Year 2010 assumption has been changed to reflect that San Marco Boulevard would extend to Bailey Road north of the project site, as suggested by the schematic alignment on the City's General Plan Land Use Diagram. An alternative alignment through the Bailey Estates project has been incorporated as a scenario of the 249-unit Reduced Density Alternative (see Section 6.3).

17-4 Refer to response to comment 17-1.

17-5 Comment noted regarding the correct figure depicting the water tank location. Page 4.7-19 of the EIR has been revised to reflect this change. Also refer to response to comment 4-8 regarding the water pressure zones.

17-6 The Revised Draft EIR describes the deficiencies in the current wastewater conveyance system and goes on to identify the improvements that would be required of the applicant. Furthermore, the applicant would have to pay a fair share to upgrade the current system.

17-7 Because details for the water tank were not available at the time the Draft EIR was prepared, a mitigation measure has been introduced that would require the tank to be buried with no more than 3 feet visible above pad level (see Mitigation Measure 4.10-5).

17-8 The current school development fee is $2.05 per square foot per dwelling unit (Dick Nicoll, Assistant Superintendent, Mt. Diablo Unified School District, September 4, 2002). The EIR has been revised to reflect this change.

17-9 Information as to the ownership of the land directly west of the project site is noted. The EIR has been revised to reflect this change.

17-10 Refer to response to comment 17-7.

MINUTES

OF THE REGULAR MEETING
OF THE

PITTSBURG PLANNING COMMISSION

February 12, 2002

A regular meeting of the Pittsburg Planning Commission was called to order by Chairperson Holmes at 7:31 P.M. on Tuesday, February 12, 2002, in the City Council Chambers of City Hall at 65 Civic Avenue, Pittsburg, CA.

ROLL CALL:

Present: Commissioners Garcia, Glynn, Harris, Kelley, Leonard, Chairperson Holmes

Absent: None

Staff: Director of Planning and Building Randy Jerome; Associate Planner Chris Bekiaris; Associate Planner Ken Strelo; Assistant Planner Dana Hoggatt; Planning Technician Christopher Barton; Assistant Civil Engineer Alfredo Hurtado; and City Engineer Wally Girard.

POSTING OF AGENDA:

Chairperson Holmes advised that the agenda had been posted at City Hall on Friday, February 8, 2002.

PLEDGE OF ALLEGIANCE:

Planning Technician Christopher Barton led the Pledge of Allegiance.

MINUTES: **January 29, 2002**

Chairperson Holmes referred to Item No. 1, Oak Hills South Subdivision (Units 1, 2, 3, 4 and 5) Fence Plan DR-01-54, and the references to Albert Seeno Jr. on Pages 2 and 3, and requested that the text be modified to read Albert Seeno III, who had been present to represent the company at that time.

MOTION:

Motion by Commissioner Garcia to approve the minutes of the January 29, 2002 meeting, as amended. The motion was seconded by Commissioner Harris and carried by the following vote:

Ayes:	Commissioners Garcia, Glynn, Harris, Kelley, Holmes
Noes:	None
Abstain:	Commissioner Leonard
Absent:	None

DELETIONS/WITHDRAWALS:

There were no deletions or withdrawals.

COMMENTS FROM AUDIENCE:

PETE CARPINO, 151 El Camino Drive, Pittsburg, commented on the fact that when the Planning Commission approved new businesses such approvals typically carried conditions of approval a business would be required to meet. He expressed concern with the current condition of the Wal-Mart property, which had deteriorated and which had become a blight. He noted that there were also eight storage units that had been placed in the parking lot taking up parking spaces. He requested that the Commission address the situation.

PRESENTATIONS:

There were no presentations.

PUBLIC HEARING:

Item 1: Bailey Road Estates Draft EIR.

Public review period for written or verbal comments on the Bailey Road Estates Draft Environmental Impact Report for a proposed 319-lot single family home subdivision on a 122 acre site located on the west side of Bailey Road on the southerly edge of the City of Pittsburg adjacent to the Concord Naval Weapons Station.

Director of Planning and Building Randy Jerome reported that the item had come before the Commission last year and had been around for the past 20 years previously titled Fox Hollow, located in an unincorporated area which had not been considered for development until a year ago. The property was located within the County's Urban Limit Line (ULL) and some adjustments had been made a year ago that had included the specific area. While unincorporated, he suggested that it should be allowed to be

annexed into the City.
Mr. Jerome advised that the City had initiated an Environmental Impact Report (EIR) for the project and had hired the firm of Carolyn Mills and Associates to prepare the EIR. He noted that the California Environmental Quality Act (CEQA) required a 45-day public review period for all Draft EIRs. The intent had been within that period to allow the general public, public agencies and other interested parties to review the document relative to the impacts associated with the proposal, along with other environmental concerns that could be raised, with those concerns to be submitted to the staff for comments with response by the consultant. Responses would be incorporated into the Final EIR. The Final EIR and the Mitigation Monitoring Program would then be forwarded to the Planning Commission for consideration as well as to the City Council.

The EIR would thereafter be forwarded to the Local Agency Formation Commission (LAFCO) after the City acted on the project and assuming the project was approved, to pursue the annexation procedures through that body.

Mr. Jerome explained that the second portion of the meeting would allow the applicant to provide a brief description and presentation of the project. After this meeting, the public hearing would be closed and the project would return to the Commission after the Final EIR was completed to allow a formal public hearing on the project itself.

Mr. Jerome recommended that the Planning Commission ask questions and accept public comments on the DEIR, then continue the public comment period through March 4, 2002.

PUBLIC HEARING OPENED

PROPONENTS:

DARWIN MYERS, a subconsultant for Mills and Associates, advised that they had started working on the Draft EIR approximately eighteen months ago with the idea that the project EIR would follow the action on the City's General Plan. Information had been gathered with the consulting staff along with eight subcontractors, traffic engineers, biologists, archaeologist, meteorologists and the like to review the various issues. If significant impacts had been found, that information had been conveyed to the applicant and City staff.

The project being analyzed was for a 319-lot single family residential subdivision. Based on the impacts identified in the EIR, an alternative had been produced that had responded to geologic hazards, biologic resource issues and other matters.

Mr. Myers advised that he would listen to the comments and make notes to ensure responses to the comments received.

JOHN STREMEL, the property owner, 2762 Hutchinson Drive, Walnut Creek, described the evolution of the project in a pictorial sense.

Referencing a conceptual drawing of the project and the property site, Mr. Stremel described the inception of the project where he had started off with approximately 319 units that had been designed to utilize the site in its most complete sense with two separate entries, one on the northerly section and the other at the southerly section of the property.

Mr. Stremel identified the property boundaries with the back side adjacent to the Concord Naval Weapons Station. He noted that through the review of the EIR, they had discovered that there were sensitive issues regarding habitat corridors and wetlands. As a result, changes had been made to the project where a habitat area had been created and housing had been eliminated in that area. He noted that the lots would be a minimum of 6,000 square feet in size on 14,000 square foot lots to allow nice sized homes in the proposed subdivision. All pads would be flat to allow the construction of upscale homes.

Mr. Stremel identified the housing that had been eliminated on the site during the process of the evolution of the plan to eliminate issues associated with wetlands and various issues to enhance the habitat corridors and wetlands to allow a better project. He presented the current plan as a result of the evolution of the project, which plan now totaled 270 lots. He stated that plan now fit better into the environment and addressed the environmental issues associated with the project, including a detention basin, and to ensure that the elements of the project would work well.

Mr. Stremel stated that he was working to refine the changes made and to work on solutions to issues raised by staff regarding findings in the EIR related to the visibility of the site from a distance as one traveled along Bailey Road. He advised that an alternative had been designed in response to the staff concerns, which alternative had included a single loaded road to allow setbacks further beyond the edge of the daylight line and visibility of the roadway corridor and allowed visibility of the front of the homes as opposed to the rear of the homes from a distance. That plan was in the process of being incorporated into the tentative map as part of the evolution of the project. He was also working with staff to incorporate a park into the subdivision.

Commissioner Glynn inquired of the number of homes that would be lost under the new configuration along with a park. He also inquired of the acreage of the proposed park.

Mr. Stremel stated that he was uncertain of the exact number of homes that would be lost with the park, although it could be as many as five to seven homes. As to the park size, staff had anticipated somewhere between 1.2 and 1.7 acres of parkland. Staff had also recommended that a turnkey completed park be associated with the project. He advised

that he would be working with staff to respond to those concerns and would return with an alternative for the subdivision where the Planning Commission could then elect whether or not to require a park or in-lieu fees associated with additional park improvements placed elsewhere.

Commissioner Glynn inquired whether or not the original 319 units in any way adversely impacted the biological aspects of the EIR. He questioned whether or not the various State or local organizations had been satisfied with the plan as presented at a size of 319 units.

Mr. Stremel explained that the initial 319 units had impacted habitat corridors and habitat wetlands. With the revisions that had been made, he understood that the new configuration had been satisfactory or beyond satisfactory to those agencies.

Commissioner Glynn referenced a Commission field trip of the property that had occurred several months ago and where he understood that the loss of the homes would be on the southernmost entrance along the frontage area as a result of the riparian corridor connection to the next level property. At 319 units as the plan had initially proposed, he questioned whether or not the riparian corridor issues had been resolved with a 319 unit project. As to the park, he inquired whether or not it would be deeded to the City for long term maintenance.

Mr. Stremel explained that the resolution of the wetland issues had been associated with the revised plan, which now totaled 270 units. He affirmed that a park would be deeded to the City for long term maintenance purposes.

Chairperson Homes commented that when the Commission had held the field trip to view the land there had been a new fence that had been installed from the Naval Weapons Station. He inquired whether or not there were other new fences that could be recognized at this time on the property.

Mr. Stremel advised that the fence that had been constructed was the perimeter fence of the property that currently existed and which he had constructed along with an internal corridor fence that ran along both sides. Additionally, a silk fence running around 36 inches in height had been installed as a result of biological studies in association with the State Department of Fish and Game.

With the loss of lots along the Bailey Road Corridor, Commissioner Leonard inquired whether or not there was any accessibility to adjacent property that could be phased in at a later time for an increase in project density.

Mr. Stremel stated that he was uncertain what would occur with the other property in the future and he had not planned any development in that area. He really did not want to

conduct any development in that area in terms of access and soils, although soils work had been done for a tank to ensure it would be solid in terms of its location. As to access to the valley area being discussed, he reiterated that he had no intention of developing that area.

INTERESTED SPEAKERS:

RICHARD SESTERO, Project Manager, Seecon Financial Construction Co. Inc., 4021 Port Chicago Highway, Concord, advised that Seecon owned the adjoining property located to the west of the Bailey Road Estates property. He submitted correspondence to the Commission dated February 12, 2002 in response to the Draft EIR.

Mr. Sestero stated that most of the concerns raised in the correspondence were minor in nature. Referencing the alignment of San Marco Boulevard (Bailey Bypass), he pointed out that there were two different alignments shown. One alignment that had been shown in the Draft EIR and the alignment Seecon was of the belief was the correct alignment for the roadway were displayed on a conceptual map.

Mr. Sestero noted that Seecon was currently developing the San Marco project and were nearing the completion of the road at the southern end of San Marco. He commented that studies had been done beyond that point to continue the alignment in a way that made sense to avoid major hillsides, sensitive areas and to tie back into Bailey Road, although the Draft EIR had identified a different alignment which had tied into Bailey Road to the north of the site.

18-1

Mr. Sestero suggested that the alignment shown in the Draft EIR did not make physical sense. He commented that at the mid-point of that alignment was a major hill that would involve a cut of 260 feet in depth to have the road to a point where it would be manageable at a 9 percent slope. If the road were designed in that fashion, it would have slide slopes of approximately 800 feet in width. He suggested that the alignment had not been adequately evaluated as to whether or not it was viable or physically realistic.

Mr. Sestero also presented the Commission with copies of the City's General Plan regarding Policy 2-P-85 for the Southwest Hills. He read the policy into the record and emphasized the importance of the alignment of the road to be brought to the south so that it could be physically constructed. In addition, as it tied into Bailey Road it was at a curved location and from a safety standpoint was not a good place to tie in. If the alignment were shifted, it would come to a point that would make more sense and could include a signalized intersection that would be safe, while also providing a good access point to the residents of the project onto Bailey Road.

Mr. Sestero further referenced Page 4.4.34 of the Draft EIR regarding Mitigation Measure

4.4-6. He read into the record the mitigation measure as written, noting that Seecon was of the opinion it was important that mitigation measure be included so that the ultimate road design coming through the area would make sense in terms of economics as well as safety. 18-1

Further, Mr. Sestero referenced the Draft EIR section on Waste Water and suggested that it appeared as if the downstream sewer for the project had not been completely studied. He explained that Seecon had developed in the area for a number of years and from the Bay Point/Pittsburg BART Station area, the sewer traveled east along the freeway to a pump station and then through a forced main, ultimately up to the Delta Diablo trunk system north of the freeway. That system had been installed in the early 1970's under the 1971-1 Pittsburg West Assessment District. The properties that had paid for that sewer system had a vested right to it and it was important that the project sewer system be analyzed to ensure if or how it should be upgraded. 18-2

Mr. Sestero also understood through the review of the Draft EIR that the project might not have adequate water capacity, although that had not been adequately studied. He requested that the items of concern, as provided in writing by Seecon, be considered and be incorporated into the document. 18-3

WARREN SMITH, a resident of Pittsburg, identified his property lines to the north of the subject property where he owned 100 acres. He stated his objection to the concentration of water being dumped onto his property. He otherwise had no objections to the increased tax base for the City and while he liked to see people have new homes to move into, he expressed his objection to the City's action in the prezoning in that when he had annexed his 100 acres into the City, no one had offered him any alternative beyond open space zoning. 18-4

Mr. Smith suggested that had been an exercise in police powers and that the City was treating similarly situated people differently. He suggested that whatever action the City was to take would be questioned, particularly if there was a grant of single family zoning for the property when the same had been denied for his property.

In response to some of the concerns raised by Mr. Sestero, Mr. Stremel expressed a willingness, through Mitigation Measure 4.4.6, to work with staff and Seecon to work out an access that was deemed to be viable.

Mr. Jerome affirmed that staff had been working on some of the redesign issues that had been referenced, including the park and road alignment. He explained that many of the issues related directly to the General Plan. He noted that the design for single loaded streets and flag lots had been recommended by staff in order to comply with new policies defined in the General Plan. The General Plan had also identified a park site on the property both in terms of need and since General Plan policy stated in part "all residents should be in a reasonable distance from a park."

Mr. Jerome advised that staff would be looking at the size of the park and the fact that a smaller park that was fully developed by the applicant with in-lieu fees or a portion of a development park might be considered.

As to the San Marco Boulevard alignment, Mr. Jerome described the alignment identified in the General Plan. He noted that while the Seecon alignment reflected a more physical development of the road, it had not been legally allowed at the time of the preparation of the General Plan due to restricted easements which did not allow any development or road. The General Plan had stated that if the easement were to be eliminated, the City could consider a realignment of the road. The intent of the General Plan statement was to call for a Bailey Road Bypass that would connect the Bay Point Interchange on State Route 4 with the upper portion of Bailey Road.

Mr. Jerome stated that staff was working with Mr. Stremel to have that road somehow logically terminate on the western edge of his property. Only until such time as the easements were removed could that occur.

Mr. Jerome otherwise reported that the public comment period would terminate on March 4, 2002. He clarified that no action was required by the Commission at this time. The sole purpose of the hearing was to take comments from the Commission and the general public for response by the consultant and for the preparation of the Final EIR.

Speaking to Bailey Road and the main entrance proposed for the project, Commissioner Garcia noted that Bailey Road was well traveled and narrow. By adding the homes, he presumed that the current intersection to the main entrance to the project would have to be redone with a north left turn lane movement that would have to be signalized. A separate right turn lane in and out movement would also have to be considered, in addition to two good lanes that would run north and south in each direction. **18-5**

Commissioner Garcia also commented that the Draft EIR for the Alves property had stated that there would be insufficient drinking water available for the project and that the Draft EIR for the subject project had recommended that a line be run all the way to the City's Water Treatment Plant. **18-6**

Commissioner Glynn inquired of the location of the park site on the subject property, to which Mr. Jerome explained that it would essentially be located in the proximity of the southerly entrance road in the interior. He affirmed that as planned, the park would consume some of the lots currently scheduled for build out.

Commissioner Glynn questioned why the park could not be situated on the northern end of the property, and Mr. Jerome advised that for the most part the northern end of the property was a wildlife corridor. As stated, the initial 319 unit subdivision had been modified to preserve a habitat corridor.

Commissioner Glynn again referenced the northerly area and commented that it appeared as if there was sufficient space to construct a park in that area, which would be closer to the center reducing the number of lots available for construction.

Mr. Jerome explained that the northern portion of the site was a fairly steep gully area with the homes currently situated on the right on the northern portion located on the knob of the hill.

Commissioner Glynn referenced the termination of the Leland Road Extension and questioned where it would exit onto Bailey Road.

Mr. Jerome identified the southerly entrance road that teased into the middle of the property. He identified another road to the right, where the Leland Road Extension would extend parallel to that and tie into and about the right/north section of a stub street. He reiterated that the public comment period would be open for the next 45-days to receive written and verbal comments on the Draft EIR.

Chairperson Holmes declared a recess at 8:21 P.M. The meeting reconvened at 8:30 P.M. with all Commissioners present.

Item 2: Mill Creek Development, Subdivision 8587, RZ-01-02, UP-01-19, UP-01-20, UP-01-21, UP01-22, DR-01-32, DR-01-43, DR-01-44, and DR-01-45.

Application by John Tomasello of Mill Creek Development requesting approval of a tentative map to subdivide 16.23 acres into six parcels and approval of an amendment to zoning regulations of the Limited Overly Zone (Ordinance 92-1043) to allow a self-storage facility and an extended stay hotel. The Applicant is also requesting approval of a use permit and design review to construct a 192,000 square foot self-storage facility; a use permit and design review to construct a 101-room extended stay hotel; a use permit and design review to construct a 2,400 fast food restaurant with drive-through service; a use permit and design review to construct a retail gas station with a car wash and a 3,000 square foot convenience store; and design review to construct a 93,000 square foot research and development/office complex on a site located on the north side of California Avenue and west of Loveridge Road, in a CS-O (Service Commercial with a Limited Overlay) zone; APN 073-190-017 and 073-190-024.

Assistant Planner Dana Hoggatt presented the request from John Tomasello of Mill Creek Development requesting approval of a tentative map to subdivide 16.23 acres into six parcels and approval of an amendment to zoning regulations of the Limited Overly Zone (Ordinance 92-1043) to allow a self-storage facility and an extended stay hotel. The Applicant is also requesting approval of a use permit and design review to construct a 192,000 square foot self-storage facility; a use permit and design review to construct a

18-1 Refer to response to comment 17-1 regarding the by-pass road extending through the proposed project.

18-2 Refer to response to comment 17-6 regarding the wastewater treatment system.

18-3 Water supply is discussed in Section 4.7 of the Draft EIR. The commentor is also directed to the responses to comments of the Contra Costa Water District, Letters 3 and 4. Commentor should refer to responses to comments 17-1 through 17-10 relative to issues raised in the Seecon letter.

18-4 Project Mitigation Measures 4.3-1A and 4.3-2 require that on-site drainage throughout the developable portions of the project site would be collected and conveyed to a detention basin on the project site (adjacent to the Smith parcel). For the 249-unit Reduced Density Alternative, this detention basin has been proposed to be located in the northeast corner of the project site. At this point the water would drain into a culvert on Bailey Road. Drainage from the developed portion of the project site would not drain on to the Smith property, however, drainage from the open space area in the northern portion of the property would continue to drain under natural conditions.

18-5 The Bailey Road intersections at the two project entrances would be constructed to accommodate left-turn and right-turn lanes and acceleration lanes. The EIR also recommends as a mitigation measure that one of the project entrances be signalized (see Mitigation Measure 4.4-4E).

18-6 Because the existing 12-inch main located on Bailey Road is not available for use by the project, it would be necessary for the applicant to install a water main between the project site and the City's water treatment plant.

Engineering Department
P.O.Box H20
Concord, CA 94524
Phone: (925) 688-8396
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Letter 19

CONTRA COSTA WATER DISTRICT

FaxMemorandum

To:	Dana Hoggatt, Assistant Planner	**From:**	Dan Owre
Fax:	(925) 252-4814	**Date:**	October 14, 2002
Phone:		**Pages:**	Three (3)
Re:	Comments on Responses to Bailey Road Estates Draft EIR		

☐ **Urgent** ☑ **For Review** ☑ **Please Comment** ☐ **Please Reply** ☐ **As Requested**

Dear Ms. Hoggatt,

This is in response to items 4-2 and 4-5 (see attached), comments received on the Bailey Road Estates Draft EIR on October 7, 2002.

The District's main concern is that the applicant must not exacerbate the existing flooding problem under SR 4 and at Ambrose Park, flooding which affects the Contra Costa Canal both structurally and in water quality. If the project is shown to worsen the existing downstream conditions, then the District believes the applicant must be obligated to correct or mitigate these problems as much as is possible though this project. **19-1**

The District requests the applicant optimize the design of the proposed detention basin to mitigate all increases in both peak storm water discharge and total runoff volume. While the District understands that the total project-related increase in runoff volume is small, any increase to an existing flooding problem is unacceptable without proper mitigation. **19-2**

The District understands that, at this time, neither the City nor the Contra Costa County Water Conservation and Flood Control District have developed drainage plans for the Lawlor Creek basin. Therefore, no long-term improvements have been identified and no fee structure has been established to which the project could contribute through development fees. Are there any plans for the City and/or Flood Control District to complete a drainage study and improvement plans in the near future, say within the next 5 years? **19-3**

The District agrees that once the drainage study is complete, then the project could be assessed its fair share of the total improvement costs, based on it proportional contribution to a worsening of existing flooding conditions. Please indicate how the project would be assessed for its share of the total improvement costs in the future.

Please let me know if you have any questions. If you require further discussions with the District, please contact me at your earliest convenience.

Dan Owre
Principal Engineer
(925) 688-8396
FAX (925) 688-8303
email: dowre@ccwater.com

LETTER
19
RESPONSE

Contra Costa Water District
Dan Owre, Principal Engineer
Engineering Department
October 14, 2002

19-1 The District's main concern is that the project does not increase peak flows under SR4 and at Ambrose Park. In response, the project is in the upper watershed area. Runoff from the project will be routed through the storm water detention basin. Because of the position of the project in the uppermost portion of the watershed, the basin design will allow peak flows in the lower watershed area to attenuate before the project peak reaches the SR4 area.

19-2 Mitigation Measure 4.3-2 in the Revised Draft EIR requires that the post-buildout peak exiting the property be less than the existing (pre-development) peak. The basin routing study performed for final design will include flows in the downstream portion of the watershed.

19-3 There are no plans in the City and/or Flood Control District to form a Drainage Area in the foreseeable future. Consequently, there are no steps being taken to identify deficiencies in the channel, no cost estimates for remediation and no plans to collect drainage fees or to require assessments for making improvements in the future.

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Concord

Letter 20

October 15, 2002

City of Pittsburg Planning Commission
c/o Randy Jerome, Planning and Building Director
City of Pittsburg
Pittsburg City Hall
65 Civic Avenue
Pittsburg, CA 94565

RE: City of Concord's Comments on the Bailey Road Estates, Final Environmental Impact Report, State Clearing House #2001022016

Dear Members of the Pittsburg Planning Commission:

The City of Concord has received the above referenced Final Environmental Impact Report (FEIR) for the Bailey Road Estates project. The proposed application consists of prezoning 122 acres of two parcels totaling 265 acres located on the west side of Bailey Road at the southern edge of the City to RS, Single Family Residential District; approving a tentative map on the property consisting of 257 single-family lots, a park, public roads and private open space; and granting design review approval of the proposed home designs.

On February 26, 2002, the City of Concord provided written comments on the Bailey Road Estates Draft Environmental Report (DEIR). Concord was concerned that the proposed mitigation measures in the DEIR did not mitigate or address significant traffic impacts related to the project. In particular, the DEIR did not clearly identify a funding mechanism to construct mitigation measures for the intersections of Bailey Road at Concord Boulevard and Bailey Road at Myrtle Drive. The FEIR does propose a funding mechanism in Mitigation Measure 4.4-2A and Mitigation Measure 4.4-2B that is acceptable to the City of Concord provided the final details of developing a traffic improvement fund for modifications at the aforementioned intersections is agreed upon by the cities of Concord and Pittsburg and Contra Costa County. Concord recently completed a landscape project at the intersection of Bailey Road and Concord Boulevard at a cost of over $500,000. Concord should not be held responsible for paying for improvements at this intersection in order to mitigate traffic impacts caused by this project and other nearby projects that are proposed in Pittsburg and Contra Costa County. Nor should Concord be responsible for improving the intersection of Bailey Road at Myrtle Drive. Except for a few in-fill housing developments, Concord is built-out near

20-1

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