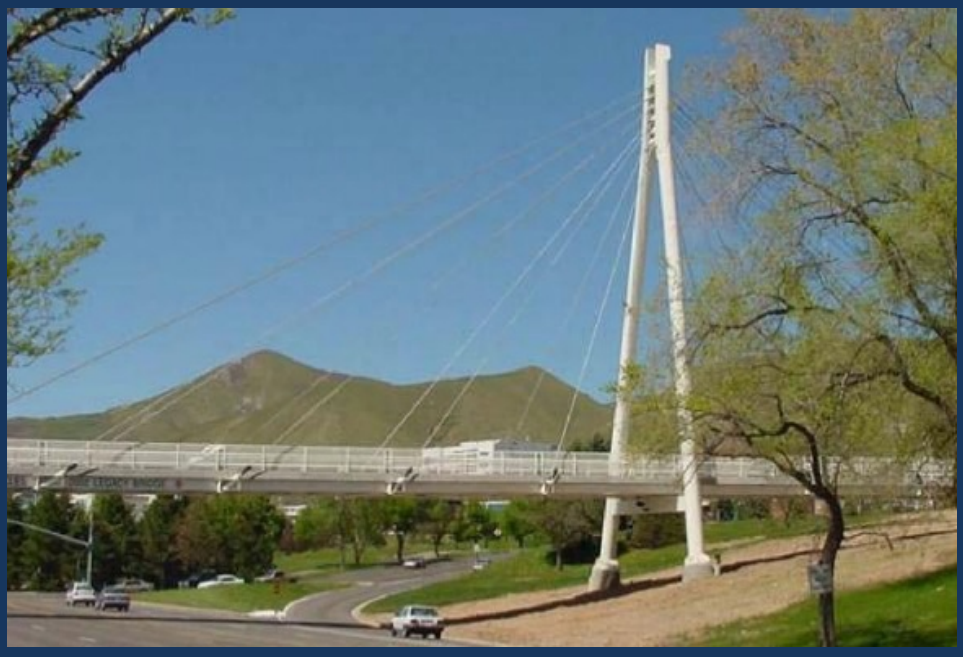
San Ramon Conceptual Bridge Design Report
Iron Horse Trail Overcrossings
Bollinger Canyon Road and Crow Canyon Road



December 2015

FINAL SELECTED CONCEPTUAL BRIDGE DESIGN REPORT

at Bollinger Canyon Road and Crow Canyon Road

prepared for

San Ramon

prepared by

BIGGS CARDOSA ASSOCIATES INC
STRUCTURAL ENGINEERS

BCA TEAM

Prepared for:

City of San Ramon
2401 Crow Canyon Road
San Ramon, CA 94583

City Council
Mayor Bill Clarkson
Vice Mayor Scott Perkins
Dave Hudson
Harry Sachs
Phil O'Loane

City Manager
Greg Rogers

City of San Ramon Staff
Phil Wong, Community Development Director
Lisa Bobadilla, Transportation Division Manager
Brian Bornstein, City Engineer
Theresa Peterson, Associate Engineer

Project Development Team
Carrie Ricci, Contra Costa County
Jim Townsend, East Bay Regional Park District
Chris Truebridge, Sunset Development
Chris Weeks, Sunset Devlelopment

Table of Contents

Executive Summary

This document provides a recommendation for transportation investments along the Iron Horse Trail, at Bollinger Canyon Road and Crow Canyon Road in San Ramon. Those investments will facilitate the increasing demands of bicycle and pedestrian travel along the regional trail and will address the growing congestion along two Regional Routes of Significance.

The Report is a continuation of planning efforts for the Iron Horse Trail. The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the connectivity at the Bollinger Canyon Road and Crow Canyon Road crossings.

In 2009, San Ramon approved the San Ramon Valley Bicycle Pedestrian Corridor Concept Plan, which studied the feasibility of integrating a series of proposed bicycle/pedestrian overcrossings along the Iron Horse Trail with adjacent transit and pedestrians oriented land use plans. The Plan evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclists and pedestrians along the Iron Horse Trail and to create a pedestrian-friendly environment at major arterial crossings. The Corridor Concept Plan was funded with Transportation Planning Land Use (T-PLUS) funds administered through the Contra Costa Transportation Authority (CCTA). Subsequently, the CCTA entered into an agreement with the City of San Ramon to oversee the expenditure of funds and oversight for the Study. The Study was a collaborative effort among the City of San Ramon, Town of Danville, Contra Costa County and East Bay Regional Park District. Callendar Associates was selected to lead the Consultant Team effort of the feasibility study.

In 2012, San Ramon secured the appropriation of $620,000 in Contra Costa Measure J Transportation for Livable Communities (CC-TLC) funding to initiate and complete the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (Community Engagement/Preliminary Design). In 2004, voters of Contra Costa County approved Measure J, a ½-cent transportation sales tax program. Measure J includes Capital Improvement Projects and Countywide Capital and Maintenance Programs. Program Number 12 is titled - Transportation for Livable Communities (CC-TLC). In the Expenditure Plan - CC-TLC program description is as follows:

The CC-TLC Program is intended to support local efforts to achieve more compact, mixed-use development, and development that is pedestrian-friendly or linked into the overall transit system. The program will fund specific transportation projects that: (a) facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development, or (b) encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling and/or transit usage. Typical investments include pedestrian, bicycle and streetscape facilities, traffic calming and transit access improvements. Both planning grants and specific transportation capital projects may receive funding under this program.

Jurisdictions will be eligible for projects that meet the eligibility criteria only if they are in compliance with the Growth Management Program at the time a grant is approved for funding allocation by the Authority. Eligible projects will be recommended to the Authority by each sub region based on a three- or five-year funding cycle, at the option of the Regional Transportation Planning Committee. Subregional programming targets will be based on the relative population share of the each in 2009, and adjusted every five years thereafter. Criteria are to include flexibility so that urban, suburban, and rural communities can be eligible.

With the completion of Phase One (Corridor Concept Plan) in 2009, Phase Two focused extensively on soliciting input and feedback from the community. Following the release of an Request for Proposals, and interviewing Consultant Teams, on November 12, 2013, City Council approved Resolution No. 2013-102 – authorizing the Mayor to Execute a Contract between the City of San Ramon and Biggs Cardosa Associates,

Inc. to implement the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Overcrossing at Bollinger Canyon Road and Crow Canyon Road.

The Consultant Team, led by Biggs Cardosa Associates, included HNTB Corporation, BKF Engineers, and Alta Planning who led the Community Outreach component. The primary objectives of the Study, included:

- Establish Project Development Team (PDT)
- Initiate Site Evaluation
- Develop and Implement Public Outreach Campaign
- Implement Community Design Charrettes
- Implement Website/Online Survey/Social Media
- Solicit input from City Committees/Commissions/Stakeholders; and
- Develop Design Alternatives and Probable Costs

The Community Outreach component of this project was extensive and included:

1. Implemented the City of San Ramon on-line Open Government Survey – residents and the community at-large had an opportunity to provide comments and feedback on the architecture of 21 bridge concepts. The on-line survey was available Thursday, October 30 through Wednesday, December 31, 2014; then again from January 28, 2015 through April 7, 2015;
2. Attended three San Ramon Farmers Market;
3. Installed signage along the Iron Horse Trail directing the public to online survey to provide comment/feedback;
4. Presented at Mayor's Breakfast – January 30, 2015;
5. Presented to San Ramon Planning Commission - February 2, 2015;
6. Solicited input from East Bay Regional Park District – February 6, 2015;
7. Presented to San Ramon Open Space Advisory Committee – February 9, 2015;
8. Presented to San Ramon Parks Commission – February 11, 2015;
9. Presented to San Ramon Economic Development Advisory Committee February 11, 2015;
10. Presented to San Ramon Teen Council – February 17, 2015;
11. Presented to San Ramon Transportation Advisory Committee – February 19, 2015;
12. Presented to San Ramon Valley Unified School District Liaison Committee - February 20, 2015;
13. Presented to Contra Costa County Board of Supervisors Water, Infrastructure and Transportation Sub-Committee – March 2, 2015;
14. Presented to San Ramon Architectural Review Board – March 12, 2015;
15. Presented to San Ramon Transportation Demand Management Advisory Committee – March 16, 2015;
16. Presented to San Ramon Arts Advisory Committee – March 18, 2015;
17. Presented to San Ramon Senior Advisory Committee – April 6, 2015;
18. Presented to Sunset Development – April 27, 2015; and
19. Presented to San Ramon Chamber of Commerce – June 23, 2015.

In addition to presentations, a "Poster Board" with all 21 bridge renderings was created. The Poster Board was displayed at the San Ramon Chamber of Commerce Business Expo and at the following city facilities:

1. Chamber of Commerce Business Expo – March 19, 2015;
2. Government 101 Planning/Community Development Presentation – March 23, 2015;
3. Community Center- March 24 through March 27, 2015;
4. City Hall – March 30 through April 1, 2015;
5. Dougherty Station Community Center – April 1 through April 3, 2015; and
6. Permit Center – April 3 through April 6, 2015.

Poster Board used for Community Outreach Activities – community members could vote on favorite bridge design at City Facilities.

On-Line Survey and Community Outreach Results

San Ramon Open Government

Bollinger Canyon Road Results

Number of Responses	
1,117	Viewed On-Line Survey
366	Responded
181	Responded and Registered
185	Responded – Did Not Register*

Crow Canyon Road Results

Number of Responses	
565	Viewed On-Line Survey
151	Responded
91	Responded and Registered
60	Responded – Did Not Register*

1,682	**Total Viewed On-Line Survey**

San Ramon Open Government (On-Line Survey), Design Charrettes, and Poster Board

Total Number of Responses	
517	Responded to On-Line Survey
23	Attended Two Community Design Charrettes
119	Commented on Iron Horse Trail Info Board

659	**Total Responses**

*Viewed online survey and responded; however did not leave contact information.

Bollinger Canyon Road Top 3 Choices and Comments

- Overcrossing should complement new City Center;
- Simple, modern, clean lines; and
- Open look and feel that preserves open views to hills.

#2

#1

#3

Bollinger Canyon Road Top 3 Bridge Designs

Crow Canyon Road Top 3 Choices and Comments

- Minimal treatment;
- Simple, safe overcrossing; and
- Warm stone and other natural elements preferred.

#1

#2

#3

Crow Canyon Road Top 3 Bridge Designs

Project Overview, Location, Description and Approach

Project Overview

The objective of this Final Selected Conceptual Bridge Design Report is to study different bridge concepts for the proposed bicycle/pedestrian overcrossings along the Iron Horse Trail. The proposed overcrossings; located at Crow Canyon Road and Bollinger Canyon Road, will improve access and safety for bicyclists and pedestrians along the Iron Horse Trail and will create a pedestrian-friendly environment at the two major arterial crossings. The study involved the development and evaluation of alternative bridge concepts, feasibility and cost estimates for the implementation of the preferred concepts at the two locations.

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T-intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase. At Crow Canyon Road, the Iron Horse Regional Trail crossing does not align with a cross street, and instead has a dedicated signalized crossing for trail users.

As part of this study the City and the consultant team preformed the following tasks and prepared the noted documents:

- Gathered input from community members and trail users on potential alignments and configurations for the two overcrossings, whether to maintain the at-grade crossing facilities, and the design aesthetic for each location.
- Prepared the Technical Memo (see attachments) that summarized the Design Charrette Process & Community Feedback for the Iron Horse Regional Trail Overcrossings at Bollinger Canyon Road and Crow Canyon Road San Ramon, CA dated June 2014 and revised April 2015
- Prepared numerous concepts and presented to the City Council
- Obtained an approved resolution; Resolution No. 2015-082 – Accepting Final Report for Community Engagement/Outreach Component of the Iron Horse Trail Bicycle/Pedestrian Overcrossing Project; and Reaffirming Conceptual Designs for Bicycle/Pedestrian Overcrossings at Bollinger Canyon Road and Crow Canyon Road (CIP 5530 and 5531), (see attachments)
- Prepared this Final Selected Conceptual Bridge Design Report

See the attached Exhibits for these documents.

Planning Process

The Study utilized the following process, which included referring to the San Ramon Valley Corridor Concept Plan, Project Development Team (PDT) meetings, stakeholder meetings, site inventory, site walks, analyzing opportunities and constraints, extensive outreach, assessing alternative overcrossings alignments and providing bridge images to facilitate visualizations of the overcrossings. A technical memo describing the outreach activities and results is attached to this report.

Funding

Funding for this phase is derived from the Contra Costa Transportation for Livable Communities (CC-TLC) Program. In 2004, voters of Contra Costa County approved Measure J, a ½-cent transportation sales tax program. Measure J includes Capital Improvement Projects and Countywide Capital and Maintenance Programs. Program Number 12 is titled - Contra Costa Transportation for Livable Communities (CC-TLC). In the Expenditure Plan - CC-TLC program description is as follows:

The CC-TLC Program is intended to support local efforts to achieve more compact, mixed-use development, and development that is pedestrian-friendly or linked into the overall transit system.

The program will fund specific transportation projects that: (a) facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development, or (b) encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling and/or transit usage. Typical investments include pedestrian, bicycle and streetscape facilities, traffic calming and transit access improvements. Both planning grants and specific transportation capital projects may receive funding under this program.

Jurisdictions will be eligible for projects that meet the eligibility criteria only if they comply with the Growth Management Program at the time a grant is approved for funding allocation by the Authority. Eligible projects will be recommended to the Authority by each sub-region based on a three- or five-year funding cycle, at the option of the Regional Transportation Planning Committee. Sub-regional programming targets will be based on the relative population share of the sub-region in 2009, and adjusted every five years thereafter. Criteria are to include flexibility so that urban, suburban, and rural communities can be eligible.

In May 2012, the Contra Costa Transportation Authority approved the Programming Plan for the Measure J CC-TLC, for Fiscal Years 2012–15. For the Southwest (SWAT) sub-region, seven projects were submitted, including two for San Ramon:

1. Iron Horse Trail Corridor Landscape Improvements – CIP #5574 ($360,000); and
2. Iron Horse Trail Bicycle/Pedestrian Overcrossing – Phase II – CIP #5530 ($620,000).

On August 28, 2012, the City Council approved Resolution No. 2012-079 approving the Master Cooperative Agreement No. 12SW.03 Between the Contra Costa Transportation Authority and the City of San Ramon. In addition, Council approved Resolution No. 2012-080 approving the Appropriation of Funds for $360,000 for the Iron Horse Trail Corridor Improvement Project, with the Engineering Services Department taking the lead on the project.

The appropriation of funding for the Iron Horse Trail Bike/Pedestrian Overcrossing (Community Engagement/Preliminary Design) is $620,000; of which $200,700 was available in FY 12/13 – 13/14 and was used to initiate the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Bicycle/Pedestrian Overcrossings. The remainder of funds, $419,300 will be used to complete the Environmental Phase and Final Design.

To initiate Phase Two, a number of endeavors were completed:

1. Developed and circulated a Request for Proposals for Phase Two – Community Engagement/Outreach and Preliminary Design (December 18, 2012);
2. Conducted a Bidders Conference (January 15, 2013);
3. Received Proposals from 7 Firms (February 1, 2013);
4. Conducted oral board consisting of staff members from San Ramon, Contra Costa County Public Works, Sunset Development, and East Bay Regional Park District (March 6, 2013);
5. Selected Biggs Cardosa Associates (BCA) Inc. to implement Phase II – Community Engagement and Preliminary Design;
6. Presented informational report to San Ramon Policy Committee (May 22, 2013); and
7. Presented informational report to City Council June 11, 2013.

The Consultant Team, as part of the Scope of Work, completed the following:

- Conducted Site Evaluation
- Initiated Preliminary Topographic Survey, Geotechnical Engineering, Utility, and Environmental Review.
- Initiated Bridge Alignment/Trail Interface Analysis
- Implemented Public Outreach
    - Design Charrette
    - Solicit input from City Council
    - Solicit Community Feedback

    - Implement Website, Conduct Online Survey using City's Open San Ramon Application, Social Media (Twitter)
- Prepared Preliminary Bridge Alternative Concepts
- Prepared Cost Estimates for Preliminary Concepts
- Prepare Summary Report and Incorporate Community Feedback, City Commissions/ Committees;
- Prepared Design Review/Preliminary Schematics;
- Prepared Design Options for City Council Consideration and Recommendation (3 options for each location);
- Revised Alternative Bridge Concepts based on feedback from the public, city committees/commissions, etc.
- Prepared Preferred Alternatives for City Council Review and Selection; and
- Developed Report - Preferred Bridge Concept

Project Development Team Meetings

Project Development Team meetings were held over a 16-month period. During this time, team members from San Ramon, Contra Costa County, East Bay Regional Park District, Sunset Development, Contra Costa Transportation Authority and the Consultant Team worked together to implement an extensive outreach component, assessed design options for the overcrossings and opportunities and constraints, and presented results from outreach activities and results to City Council. Ultimately the City Council, selected two design options for Bollinger Canyon Road and one design option for Crow Canyon Road. See appendix for the PDT meeting summaries.

- PDT #1 (kick-off meeting) – February 21, 2014
- PDT #2- May 9, 2014
- PDT #3 – September 26, 2014
- PDT #4 – February 6, 2015
- PDT #5 – June 26, 2015

The Iron Horse Trail

Following an abandoned railroad right-of-way, the Iron Horse Trail is a highly-used regional multipurpose trail connecting the cities of Dublin to the south (including the Dublin-Pleasanton BART station) and Concord to the north, providing interconnections with a number of other significant regional trails and passing through the communities of San Ramon, Danville, Alamo, Walnut Creek, Pleasant Hill, and Concord. As is typical with railroad corridors, the right-of-way includes a number of major utilities, including a high-tension power line, fuel and gas pipelines, fiber optics, storm drains and water lines. While utility sizes are known, precise locations and depths require further investigation in terms of optimizing final placements of the bridge structures. The right-of-way also includes an easement for a future Light Rail Transit (LRT) corridor which, if retired, would provide new possibilities for the alignment and geometry of the approaching trail, approach structures, and the overcrossings.

Although the trail passes through the core of San Ramon, it is essentially "back of house" with major land uses backing-up to it rather than fronting it. The well-manicured trail is a strongly-defined spatial corridor lined with mature trees and landscape buffers along most of its length, and the experience of users is more pastoral than urban. At Bollinger Canyon Road, this will change with the development of San Ramon City Center which will front the trail, providing a distinctly urban experience.

Crow Canyon Road

Lined primarily with automobile-oriented retail-commercial development, Crow Canyon Road currently serves as San Ramon's east-west arterial, forming a wide, straight line connecting the eastern hills to the I-680 freeway. Coming down from the hills or off the I-680 overpass, motorists are offered uninterrupted sweeping views of the city core and surrounding terrain.

In this setting, the Iron Horse Trail Bridge will stand out as a prominent landmark and defining point of focus along the entire corridor between the freeway and to the east of El Capitan Drive, a distance of almost a mile. By separating trail users and motorists, the bridge will greatly enhance pedestrian/bicyclist safety and convenience, as well as ease traffic operations along the corridor.

As the visual gateway to San Ramon's primary commercial corridor, the bridge's form is chosen to be iconic, assertive, easily grasped and memorable. At this location, the bridge is located along the western edge of the corridor. This location would necessitate very little trail realignment where the bridge meets grade. Because it would no longer be necessary, the existing signal pole for the on grade crossing would be removed. As a result, the traffic flow on Crow Canyon Road will be substantially improved.

Bollinger Canyon Road

In comparison to Crow Canyon Road, the existing context of Bollinger Canyon Road is somewhat less urban. The road gently curves through Bishop Ranch, a landscape of primarily high-quality contemporary office buildings set back behind tree-lined parking lots. The curved alignment limits the visibility of the Iron Horse Trail Bridge to about a half mile stretch of Bollinger Canyon Road, between Chevron Drive to the west and Alcosta Boulevard to the east. The bridge will create a defining element along the Bollinger Canyon corridor. As a "gateway" element, the bridge will also serve to improve safety.

Proximity to the City Center, in this case, it is the future context that calls for an iconic bridge. The development of San Ramon City Center will completely transform the context of Bollinger Canyon Road. With its high density, intense mixed-use and distinctive architecture, San Ramon's City Center will itself become the corridor's defining point of focus.

In addition to serving users of the Iron Horse Trail, the bridge will serve to link key destination areas of San Ramon, including City Center and Bishop Ranch Business Park. It will also be a bridge that links San San Ramon's Central Park, City Hall, Library, Transit Center, and the region's signature path for pedestrians and bicyclists.

At this location, the bridge is aligned between the light rail transit corridor to the east and a storm drain easement to the west. The trail on the north end of the bridge will require minor realignment to meet up with the bridge ramp. This bridge is anticipated to be custom designed and fabricated, in keeping with the significance and magnitude of the City Center improvements. This bridge will complement the architecture and appearance of the City Center as manifested in the conceptual plans for this facility.

Common Features and Requirements

Design Parameters for the overcrossings at Crow Canyon and Bollinger Canyon Roads were taken from different sources. One of the most broadly adopted sources of design criteria is provided by the State of California Department of Transportation (Caltrans). Adherence to Caltrans criteria is a requirement for projects within Caltrans right of way and where adopted by the local municipality. The Caltrans criteria provide a set of time-tested requirements. As Caltrans is responsible for the implementation of safe, maintainable infrastructure, the criteria applied to structures are based on conservative assumptions. This report assumes partial, but not wholesale adoption of Caltrans standards. For the following bridge concepts, these design parameters were used:

Bridge Alignments & Geometry

Future development of the bridge alignments and profile grades will consider the following design references:

- Caltrans Pedestrian Accessibility Guideline for Highway Projects; Design Information Bulletin (DIB) 82-05;
- Caltrans Design Checklist (vertical curves, design speeds, etc.) (DIB) 78-03;
- Caltrans Highway Design Manual (HDM);
- AASHTO Guide for the Development of Bicycle Facilities (4th Edition); and
- According to the HDM, the target design speed for a Class I overcrossing is 20mph.

Approaches

Approaches will have a continuous slope of slightly less than 5% and are therefore not ramps. Under the Americans with Disabilities Act (ADA), a path with a slope between 5% and a maximum allowable slope is 8.33% is defined as a ramp. A ramp must provide a level landing for every 30 in of elevation rise. Furthermore, Section 1023.6 (currently Section 1133B.7.6) in Part II of Title 24 California Code of Regulations (CCR) states that walks with continuous gradients (slopes between 2% and 5%) shall have level areas (2% max) at least 5 feet in length at intervals of at least every 400 ft. However, grade breaks between slopped and level sections may be smoothed out by use of vertical curves, a "bicycle friendly" detail.

Using continuous slope of slightly less than 5% which avoids the approaches being defined as "ramps" results in longer approach ramps but elimination of the intermittent level pads that would be required of approaches of 5% or steeper will make the bridges much easier to negotiate for bicyclists.

Therefore the project preference is to keep the approach gradients at less than 5%.

Vertical Clearance

The minimum vertical clearance to the underside of the pedestrian bridges is 17' per Caltrans' requirements for pedestrian overcrossings over the traveled way of state roadways. For purposes of the concepts presented in this report, a 17'-0" clearance at each intersection is assumed.

Tread Width

Per Caltrans Highway Design Manual (HDM), Topic 1003 - Bikeway Design Criteria, and 1003.1 Class I Bikeways (Bike Paths), "the clear width of a bicycle path on structures between railings shall be not less than 10 feet. It is desirable that the clear width of structures be equal to the minimum clear width of the path plus shoulders (i.e., 14 feet)".

A tread (or deck) width of 16 feet is proposed for the Crow Canyon Road overcrossing and a tread width of 16 to 20 feet is proposed for the Bollinger Canyon Road overcrossing. These higher tread widths are based on minimums recommended for the anticipated future traffic volumes, allowance for emergency vehicle access on the overcrossings, safety, and the City's preferences. Treads wider than 20 feet are not proposed due to cost impacts and the difficulty associated with accommodating a wider bridge within the corridors where significant existing and proposed uses must also be accommodated.

Guardrails

Both overcrossings are proposed to include guardrails in compliance with the American Association of State Highway and Transportation Officials Standards/ Load and Resistance Factor Design (AASHTO LRFD) Bridge Design Specifications; a minimum height of 48" per CA Amendment to AASHTO (which provides fall protection to bicyclists as well as pedestrians) with no openings large enough to allow a 6" sphere to pass through in accordance to the AASHTO Guidelines.

Bridge Design including Wind and Seismic Design

There are many different wind and earthquake design considerations and criteria that must be incorporated into the bridge design. The project-specific design criteria for wind and seismic design will consider the following design guidelines and codes:

- AASHTO LRFD Bridge Design Specifications;
- Various Caltrans bridge design documents including Caltrans Seismic Design Criteria and the Guide Specifications for Seismic Design of Steel Bridges;
- AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges; and others.

Drainage

The surface of the overcrossing will have a minimum cross slope of 1 percent for proper drainage, consistent with Caltrans *Highway Design Manual* Chapter 1000 specifications. Sloping in one direction usually simplifies longitudinal drainage design and surface construction, and accordingly is the preferred practice. The overcrossing drainage system will include pipe or deck drains that discharge to the adjacent local drainage system via bridge columns and on-site landscape bio-treatment areas where feasible.

Under the Municipal Regional Stormwater NPDES Permit (MRP), projects that create and/or replace 10,000 square feet or more of impervious surface must be able to treat or infiltrate a certain amount of water based on the rate of flow. Low Impact Development (LID) or Integrated Best Management Practice (IBMP) measures will be used to minimize imperviousness to the extent feasible, or to infiltrate, store, detain, evapotranspire, and/or bio-treat runoff on-site or at the source. The design will reference the *City's Sustainable Green Streets and Parking Lots Design Guidebook*, with regard to concepts for stormwater planters, bioswales, and green gutters.

Screening

Although Caltrans requires screen fencing with a minimum height of 8'-4" along the sides of pedestrian bridges over highways, screening in conformance with these requirements is not proposed and will require further evaluation. Advantages of the screening are an additional measure of safety as persons on the bridge will be less able to climb over the fencing than over a guardrail alone. Screening also tends to discourage throwing or tossing of objects from the bridge onto the roadbed below. Conversely, screening tends to significantly change the character of the bridge and the experience of persons travelling across the bridge. Views are obscured and a sense of openness is lost. Additionally, screening may increase the visual impact of the bridge from the roads below, tending to increase the perception of mass.

Embankments

Approach ramps can be built according to three basic designs including:

- Earthen mounds with sloping sides.
- Mechanically stabilized earth (MSE) embankments with vertical side walls.
- Spans (approach bridges supported on columns).

Earthen mounds with sloping sides may not be practical because of the narrowness of the corridor and the presence of existing and future uses. MSE embankments with vertical side walls are proposed for the initial segment of the approaches to the main spans to allow the construction on grade (compacted earth) up to an elevation of approximately 8 feet. With a conservative design parameter of the width of the supported area

equal to not more than ½ the height, 8 feet in height approximates a 16 foot 'footprint' which is assumed to be achievable within the constraints of the corridors. Above 8' height, column-supported spans are proposed to connect the MSE-supported approach ramps with the main bridge spans over the roadways.

Lighting

Bridge surfaces will be illuminated to IES standards to permit safe passage during all hours including the night-time that the trail is in use. Additionally, it is anticipated that the bridges will be up-lit for aesthetic purposes to enhance their appearance at night and improve safety.

Lighting is required to be installed on the overcrossings and will be provided along the entire structure. General bicycle path lighting is discussed in the HDM. Any lighting installed on the overcrossing will be shielded to avoid direct light spreading to sensitive receptors adjacent to the structure where light can be a distraction for vehicles. It is anticipated that the basic lighting for the structure will be provided along the bridge railing, to be mounted along the top of the railing fence or along the hand railing. Additional lighting may also be considered that highlights decorative surfaces or elements on the bridge structure. Examples include column lighting, up-lighting of deck undersides and bridge superstructure (arches, stay cables, truss members, etc.), and the creation of unique effects such as colored lighting and programed animation.

Maintenance

The bridges will be wide enough to accommodate light maintenance vehicles and are not proposed to accommodate larger vehicles. Where vehicular access to both ends of a bridge can be reasonably achieved without using the bridge, it is generally better to have a design to accommodate the needs of pedestrians and bicyclists only. Designing to accommodate larger vehicles tends to increase costs and can necessitate changes to the trail and bridge geometry (widths, turning radii, etc.). The bridges will be designed to minimize maintenance.

Falsework

Falsework may be required for construction of the main bridges and ramp/approach structures.

Foundation

Cast-in-Drilled-Hole (CIDH) piles, Cast-in-Steel-Shell (CISS), or multiple small diameter piles may be used for the proposed bicycle/pedestrian overcrossings. If the main bridge and approach structures are supported on single Type II CIDH shafts with column extensions, permanent or temporary casings may be required for CIDH pile construction.

Aesthetics

The objective of bridge aesthetic design (or bridge "architecture") is to support a cost-effective structure while providing unique and functional design elements that provide a "signature" image relating it to the adjacent neighborhoods and community, thus creating a positive experience for users and stakeholders. In addition to the signature designs proposed for the main structures, possible treatments for the design and decoration of columns, soffits, ramp abutments and walls, railings, screens, lighting and landscaping will be developed and presented for review by the City decision-makers and the public.

For concrete decks, girders and columns, aesthetic treatments such as special texturing, formwork, reveals, or insets will be considered. There is some concern about graffiti with the possible long abutment walls. Design features to minimize graffiti include cast textures in the concrete surface of the walls, planting of vines that will cover the walls, and potentially the use of murals by local artists.

Environmental Issues and Clearance

California State Law requires that all projects requiring a public hearing undergo an environmental review, in compliance with the California Environmental Quality Act (CEQA). For purposes of this report, policy requirements have been identified to the degree that the project is sufficiently defined for this purpose.

Because the overcrossings are being constructed in an urban area that is surrounded by urban neighborhoods and a regional shopping center, there will not be major impacts to agricultural, biological or mineral resources. Initial research does not suggest that there are any cultural or historic resources that would be impacted. The project will not increase noise levels or have negative impacts to emergency access and public services, nor will it cause the displacement of existing housing or people. The project is expected to improve air quality over the long term, as well as transportation and traffic issues, and access to recreational facilities. Impacts to some residential views and privacy (e.g., north of Crow Canyon overcrossing) will be evaluated during the environmental review process.

The City in concert with CCTA will conduct an environmental analysis for the project, as well as environmental review under the National Environmental Policy Act (NEPA).

License Agreement

The City of San Ramon will obtain a license agreement or a mutually agreeable document, Memorandum Of Understanding (MOU), and Easement from Contra Costa County for the development of any bridges in the Iron Horse Trail Corridor.

Right of Entry Permit

A Right of Entry Permit is required by Contra Costa County.

Access Permit

The City will need an Access Permit with East Bay Regional Parks District. This agreement will also designate who will maintain specific project elements and areas and which public agencies will take leadership.

Maintenance Agreement

A maintenance agreement will be entered into by the agencies responsible for maintenance of the bridge and its approaches.

Preliminary Bridge Alternative Concepts & Probable Cost Estimates

Overcrossings at the two locations will be responsive to their existing site context (see Iron Horse Trail, Crow Canyon Road, Bollinger Canyon Road in above pages). As noted, the Bollinger Canyon Road site is anticipated to change dramatically due to the City Center development. Consideration of this change has been accounted for during the development of the overcrossing concepts.

Based on concepts developed and discussed in a public charrette in 2014, a suitable range of preliminary bridge design alternatives (bridge types) were developed for each crossing. As a result of the charrette and a comprehensive public preference survey conducted by the City of San Ramon, the "Cable-Stayed" and "Tied Arch" bridge types were selected and was accepted by the City Council for further study of the Bollinger Canyon Road crossing, and the "Tied Arch" bridge type was selected for further study of the Crow Canyon Road crossing.

Data Collection and Background Mapping

The following tasks were performed, documented and resulted in the background mapping (see attachments) that was used for overall illustrations of the bridge layouts in relation to the trail:

- Data Collection & Review of Available Information
  - Reviewed Available Information and Requested/Compiled Record, As-Built Files/Information, Geographic Information System(GIS)/Aerial Mapping, Survey/Topo and Reports from:
    - San Ramon
    - Bishop Ranch (Design Plans for City Hall)
    - Contra Costa County Public Works
    - BCA/Previous Studies and Reports
    - Contra Costa County Public Works
    - Walnut Creek and County (Ygnacio and Treat Pedestrian Overcossing Information/As-Builts)
  - Site Visits/Verification of Existing Conditions
  - Compiled/developed AutoCAD Base Mapping, including aerial (orthophoto) mapping, right of way, topo/planimetrics, storm drain, and GIS information for Bollinger Canyon and Crow Canyon Roads.

- Boundary Identification
  - Compiled Available Record Right-of-Way (R/W) Information based on files/data provided by Contra Costa County, including Iron Horse Trail record R/W and Easement designation.

- Utility Investigation/Mapping
  - Contacted the following Utility Companies and requested Utility Record/As-Built Files, including AutoCAD, Block Maps, and Hard Copy Prints:
    - AT&T
    - PG&E
    - San Ramon (storm and electrical)
    - Kinder Morgan
    - Comcast/CableCom
    - Time Warner
    - Verizon
    - EBMUD
    - Central Contra Costa Sanitary District
    - Bishop Ranch
  - Site Visits/Verification of Existing Conditions and Utility Disposition
  - Incorporated Utility Record (As-Built) Information and developed AutoCAD Base Mapping for Utilities for Bollinger Canyon and Crow Canyon Roads

Cable-Stayed Bridge Types

The Cable-Stayed bridge type superficially resembles a traditional suspension bridge but is actually a distinct structural system optimizing the combined support of highly-tensioned steel rope hangers and a deck acting in compression (in a traditional suspension bridge, the deck is "passive", neither in compression nor in tension). Cable-stayed bridges come in many variations and are prized for their iconic towers and harp-like cable patterns. For the Bollinger crossing, the cable-stayed variation is "symmetrical", consisting of a central tower supporting two equal-length spans of 240 feet, for a total length of 480 feet. The height of the tower is approximately 110 feet above the roadway. For each of the two tower location options under consideration (see below), one span serves as the main span crossing Bollinger Canyon Road.

Tied Arch Bridge Type

The Tied Arch bridge type is an economical variation of a standard arch in which the outward/downward diagonal thrust of the arch is resolved by the bridge deck acting in tension (similar to how a bowstring contains the elastic force of a bow). This enables the arch and deck to be "self-contained" and only pass vertical dead/live loads and lateral seismic loads to bridge abutments and foundations. In highly constrained corridors such as railways and high-volume streets, the tied arch bridge can be assembled off-site and lifted into place by cranes or jacks, avoiding the need for disruptive and costly falsework. For the Bollinger Canyon Road and Crow Canyon crossings, the tied arch main span is approximately 240 feet long with the top of the arch at 70 feet above the roadway. The arch would be constructed of steel members with the bridge deck suspended from the arch by vertical or inclined steel rope hangers.

City Council Meetings

April 28, 2015 City Council meeting, staff and consultant team presented a wide range of conceptual bridge alternatives based on the Tied Arch and Cable-Stayed bridge types for the Bollinger Canyon and Crow Canyon crossings. At the meeting, Council directed staff to further study the following alternatives and present the results of this study at the Council meeting on July 14, 2015:

- **Bollinger Canyon Road:**

  Option 1-A: Cable-Stayed main span with main tower on south side of Bollinger Canyon Road

  Option 1-B: Cable-Stayed main span with main tower on north side of Bollinger Canyon Road

  Option 2: Tied Arch main span

  For Options 1-A and 1-B, Council also requested staff to present sketches of two types of main towers:

  Type 1: Single-mast tower on center axis of bridge with widened deck passing around tower on both sides

  Type 2: Split-leg ("A-Frame") tower with deck passing between the legs

- **Crow Canyon Road:**

  Option 1: Tied Arch main span

July 14, 2015 City Council meeting, the consultant team prepared conceptual cost estimates, visual renderings, and exhibits for Council consideration in selecting or confirming the final bridge alternatives to carry forward into the preliminary engineering and environmental clearance phases of the project.

Prior to the Council meeting, a Site Visit of the Iron Horse Trail Overcrossing Bridge locations were performed at Bollinger Canyon Road and Crow Canyon Road by the City Council, City Staff and the Consultant. The meeting started at 5:00 PM at the intersection of Bollinger Canyon Road and the Iron Horse Trail (near the new city hall)

For a summary of Council selections and recommendations passed at the July 14, 2015 Council Meeting, see "Preferred Bridge Type & Preliminary Estimate of Probable Costs", below.

As an outcome of the July 14, 2015 Council Meeting, staff was requested to shorten by 240 feet the length of the northern approach for all Bollinger Canyon options. Purpose of this modification (which removes an additional 240 foot long column-supported section) is to reduce development costs while still maintaining effective at-grade pedestrian circulation between City Center and City Hall. Exhibits of this modification are included in this report and covered in the table "Preferred Structures Summary" (see below).

Summary of Details Presented on Bridge Alternatives at July 14, 2015 Council Meeting:

- **Elements in common with all Bollinger Canyon Bridge alternatives:**
    - All alternatives featured a 240 foot main span crossing over Bollinger Canyon Road, long enough to minimize visual impact and allow for future road widening and generous sidewalk and landscape buffer opportunities along the street.
    - All alternatives were "clear span", i.e. no supporting columns in the street or median.
    - The maximum deck width presented was 20 feet, to accommodate the significant foot traffic anticipated to be generated by the City Center improvements in addition to expected Iron Horse Trail usage. Although subject to further study, the deck may be subdivided into separate walking and cycling "lanes" in respect to the anticipated high localized pedestrian volumes.
    - All alternatives included an extended elevated section to the north (supported on columns) prior to descending to ground level – the purpose of this elevated section was to minimize visual and functional blockage of pedestrian circulation between Phase 2 of City Center, City Hall, and Central Park.
    - Similar to other signature overcrossings of the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road), all alternatives included approach sections partly on columns instead of all on earthen fill, to reduce visual impact and blockage of pedestrian circulation at ground level.
- **Additional sub-variations for Bollinger Canyon Bridge Cable-stayed options (Options 1-A and 1-B):**
    - Single Mast Main Tower: A single vertical tower on the axis (centerline) of the bridge. The path splits around the tower with (subject to further study) cycling lane on one side and walking lane on the other. The deck would widen around the tower to maintain an active width of 20 feet.
    - Split ("A-Frame") Main Tower: In this variation, the tower splits into two separate legs with the deck passing between them. At the top of the split, the tower continues upward as a single mast. The visual effect resembles a "capital A", hence the term "A-Frame". Many visual refinements are possible with this variation, all the subject of further study.
- **Elements of Crow Canyon Bridge alternative:**
    - The Tied-Arch alternative features a 240 foot main span crossing over Crow Canyon Road, long enough to minimize visual impact and allow for future road widening and generous sidewalk and landscape buffer opportunities along the street.
    - The alternative is "clear span", i.e. no supporting columns in the street or median.
    - The suggested deck width is16 feet. Although wider than similar overcrossings along the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road have 10-foot wide decks),

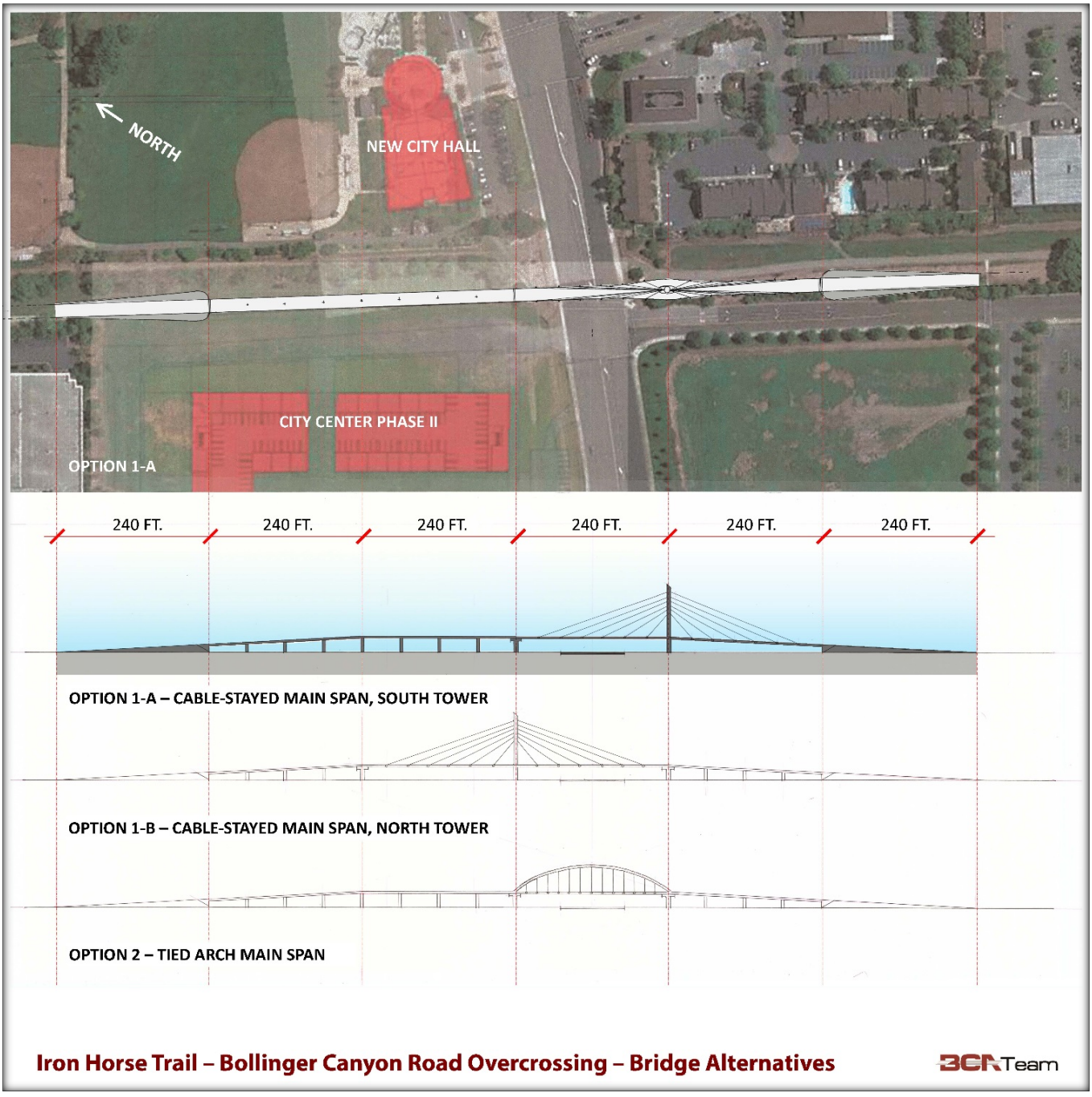
this added width better accommodates access by light emergency and service vehicles.

- Similar to other signature overcrossings of the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road), approach sections are primarily on columns instead of on earthen fill, to reduce visual impact and blockage of pedestrian circulation within the trail corridor at ground level.

- **Illustrations and approximate dimensions of alternatives**:
  The following exhibits were shown at the July 14, 2015 Council Meeting, on boards and in a PowerPoint presentation. Note that these dimensions are "concept-level" and subject to revision and refinement during further study, including strategies to reduce the relative or absolute costs of any alternative selected. Span segments are listed in order from south to north.

  - Bollinger Canyon, Option 1-A (Cable-Stayed, tower on south side of street):
    - South Approach / filled section – 240 feet
    - South Approach / cable-stayed back span – 240 feet
    - Main Cable-Stayed Span over road – 240 feet
    - North Approach / column-supported – 240 feet
    - Optional Additional North Approach / column-supported extension – 240 feet
    - North Approach / filled section – 240 feet
    - TOTAL – 1440 feet

Iron Horse Trail
Bollinger Canyon Road
Bridge Alternative Concepts


NORTH
NEW CITY HALL
CITY CENTER PHASE II
OPTION 1-A
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
OPTION 1-A – CABLE-STAYED MAIN SPAN, SOUTH TOWER
OPTION 1-B – CABLE-STAYED MAIN SPAN, NORTH TOWER
OPTION 2 – TIED ARCH MAIN SPAN
Iron Horse Trail – Bollinger Canyon Road Overcrossing – Bridge Alternatives
3CR Team

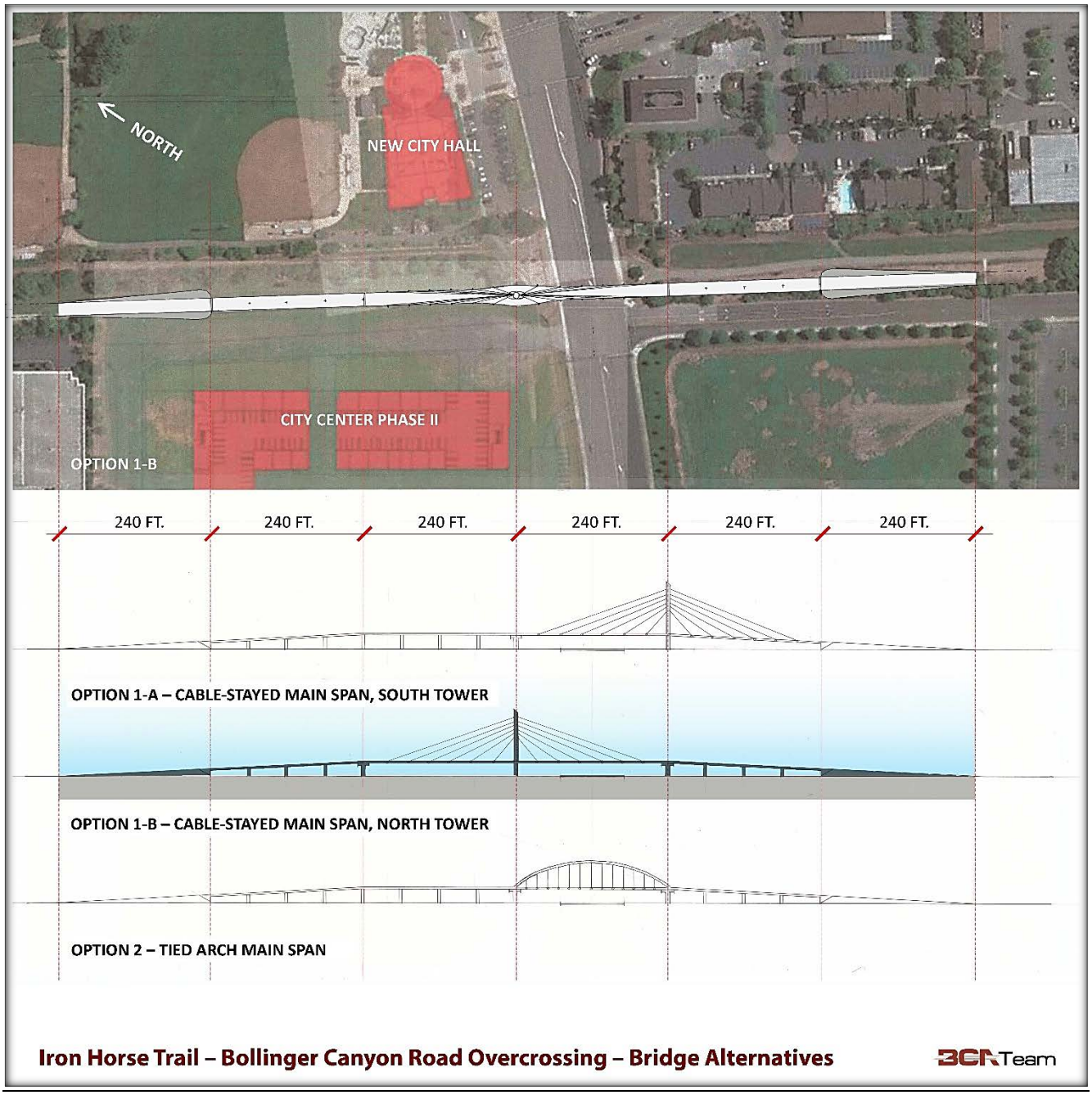
Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking east BCA Team

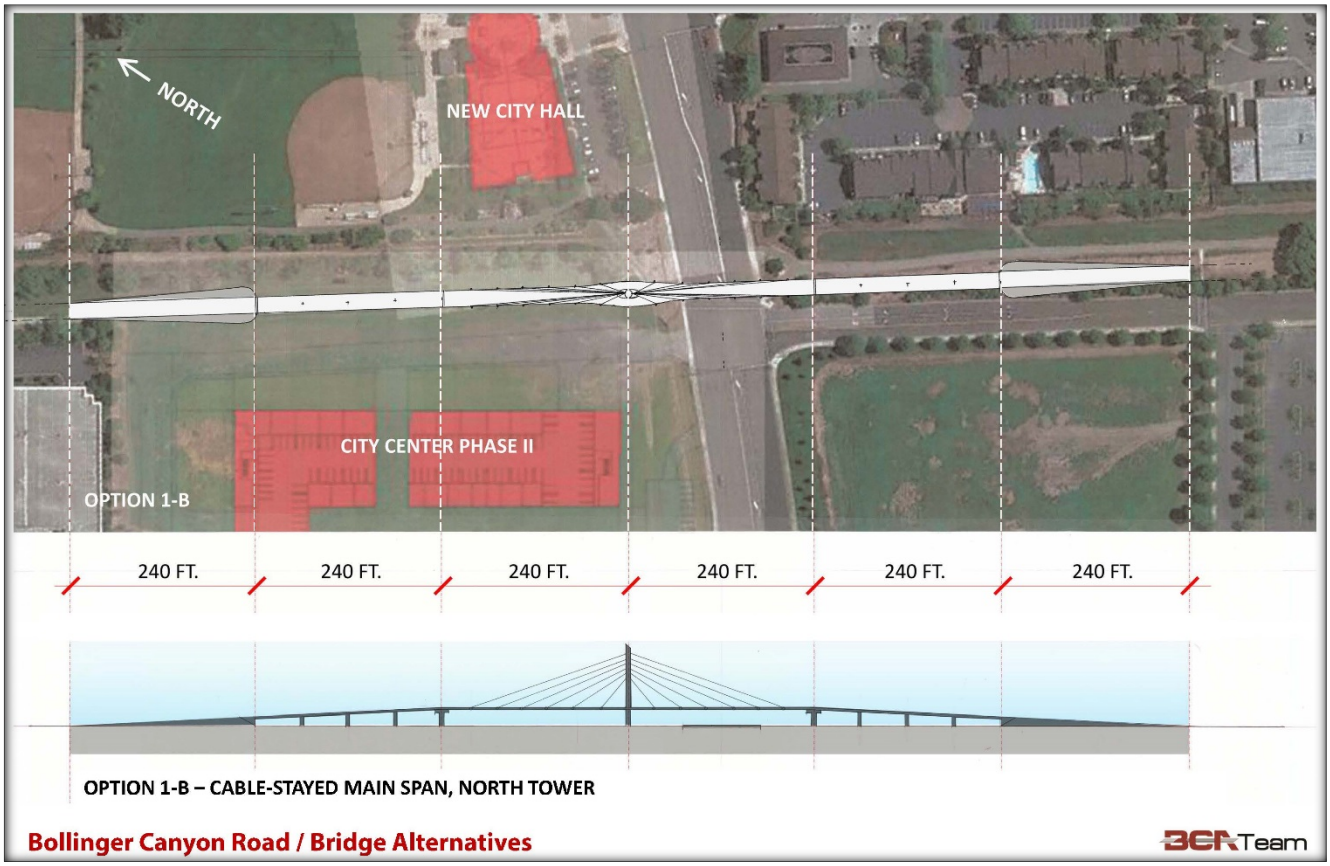
Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking west BCA Team

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking east BCR Team

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking west BCR Team

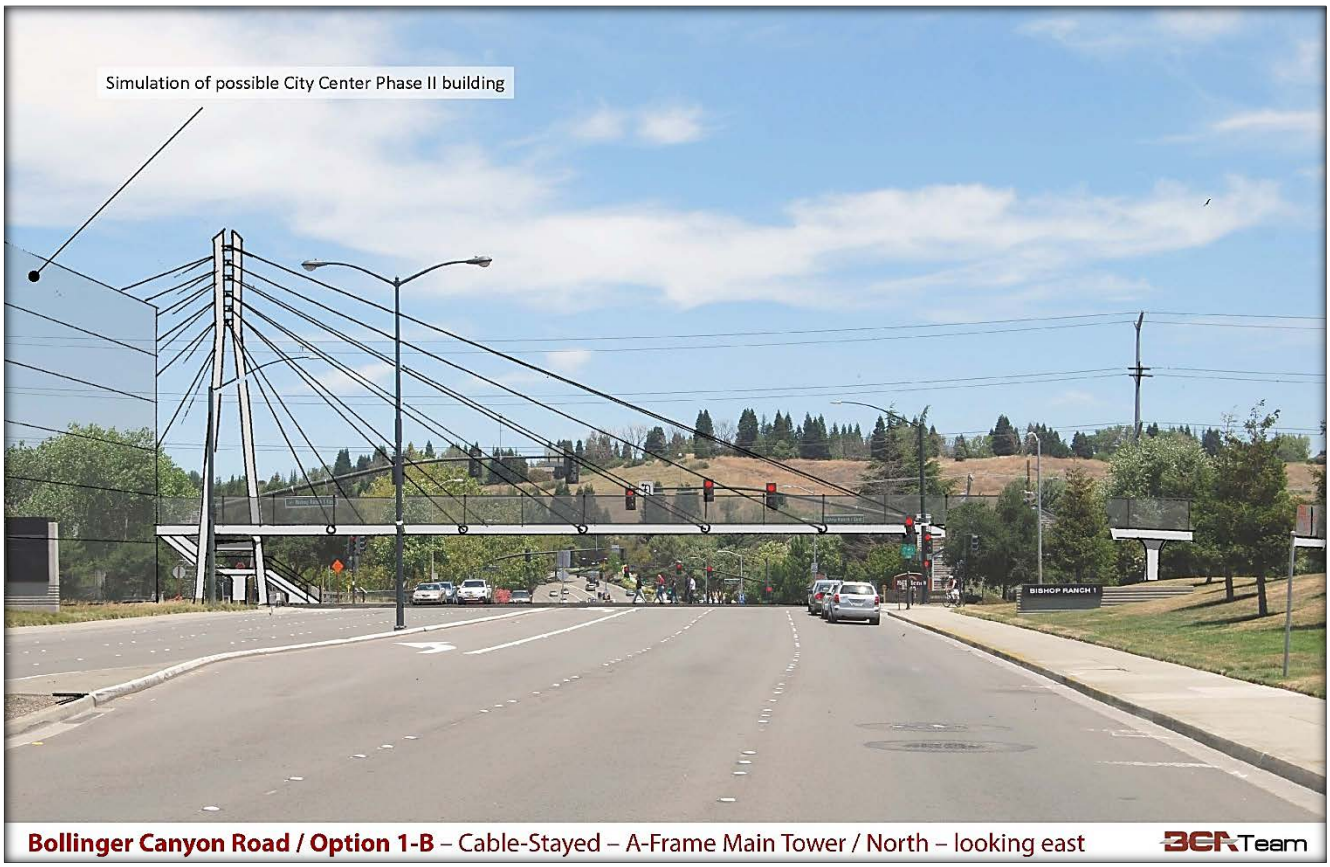
- **<u>Bollinger Canyon, Option 1-B (Cable-Stayed, tower on north side of street):</u>**
  - South Approach / filled section – 240 feet
  - South Approach / column-supported – 240 feet
  - Main Cable-Stayed Span over road – 240 feet
  - North Approach / cable-stayed back span – 240 feet
  - Optional Extended North Approach / column-supported – 240 feet
  - North Approach / filled section – 240 feet
  - TOTAL – 1440 feet




NORTH
NEW CITY HALL
CITY CENTER PHASE II
OPTION 1-B
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
OPTION 1-B – CABLE-STAYED MAIN SPAN, NORTH TOWER
Bollinger Canyon Road / Bridge Alternatives
BCR Team

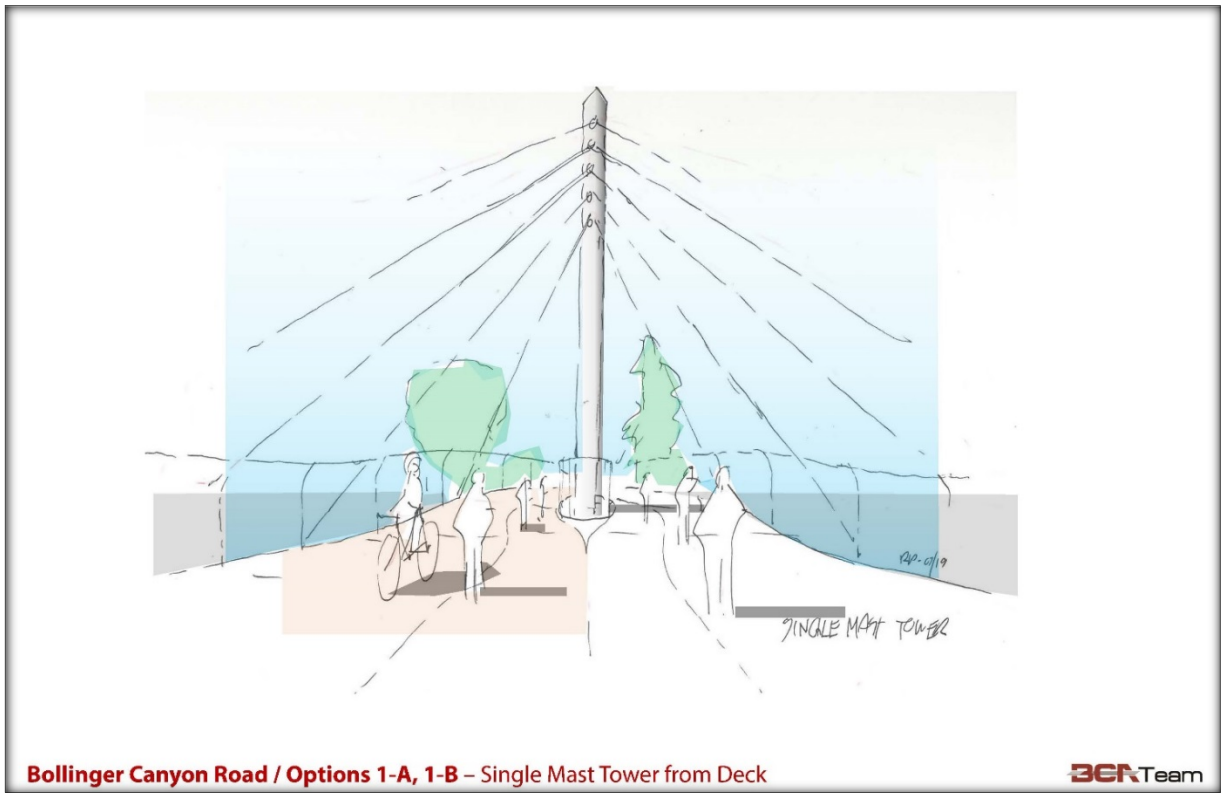

Bollinger Canyon Road / Option 1-B – Cable-Stayed – All Towers / North – looking west
BCR Team

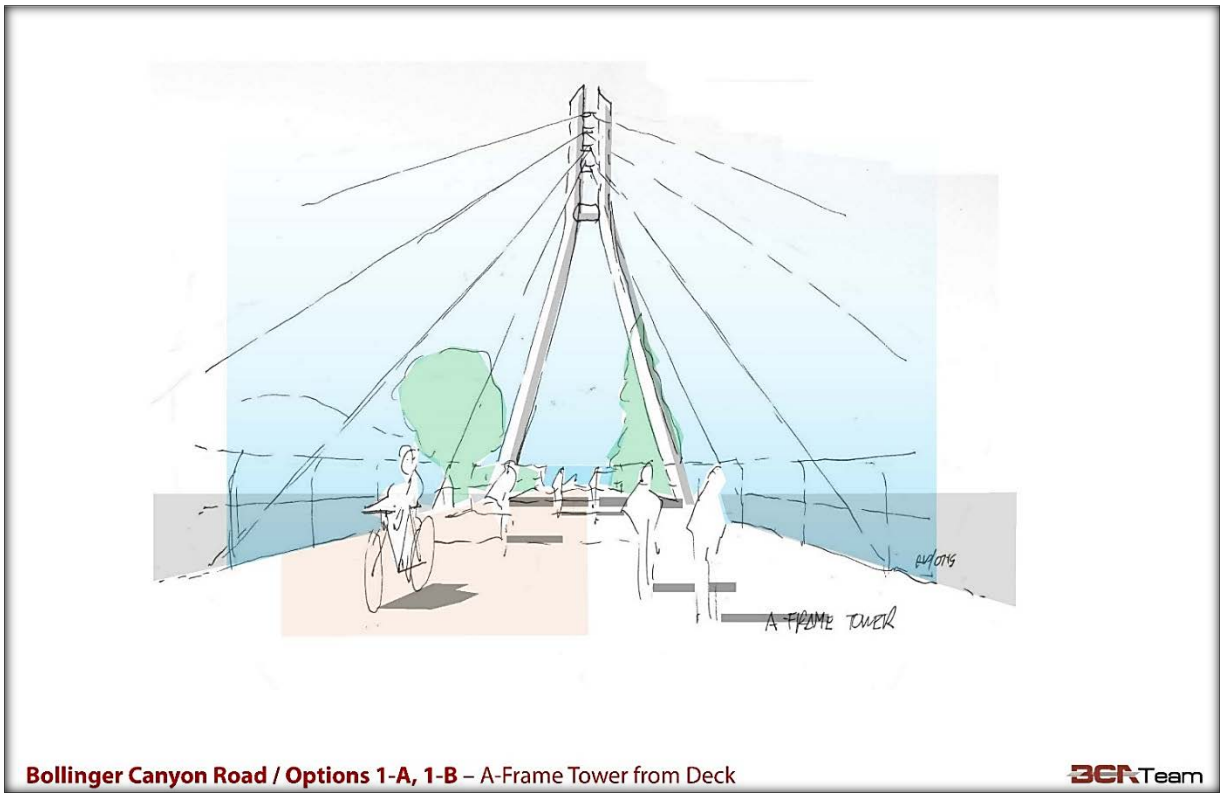
Bollinger Canyon Road / Option 1-B – Cable-Stayed - Single Mast Main Tower / North – looking east BERTeam



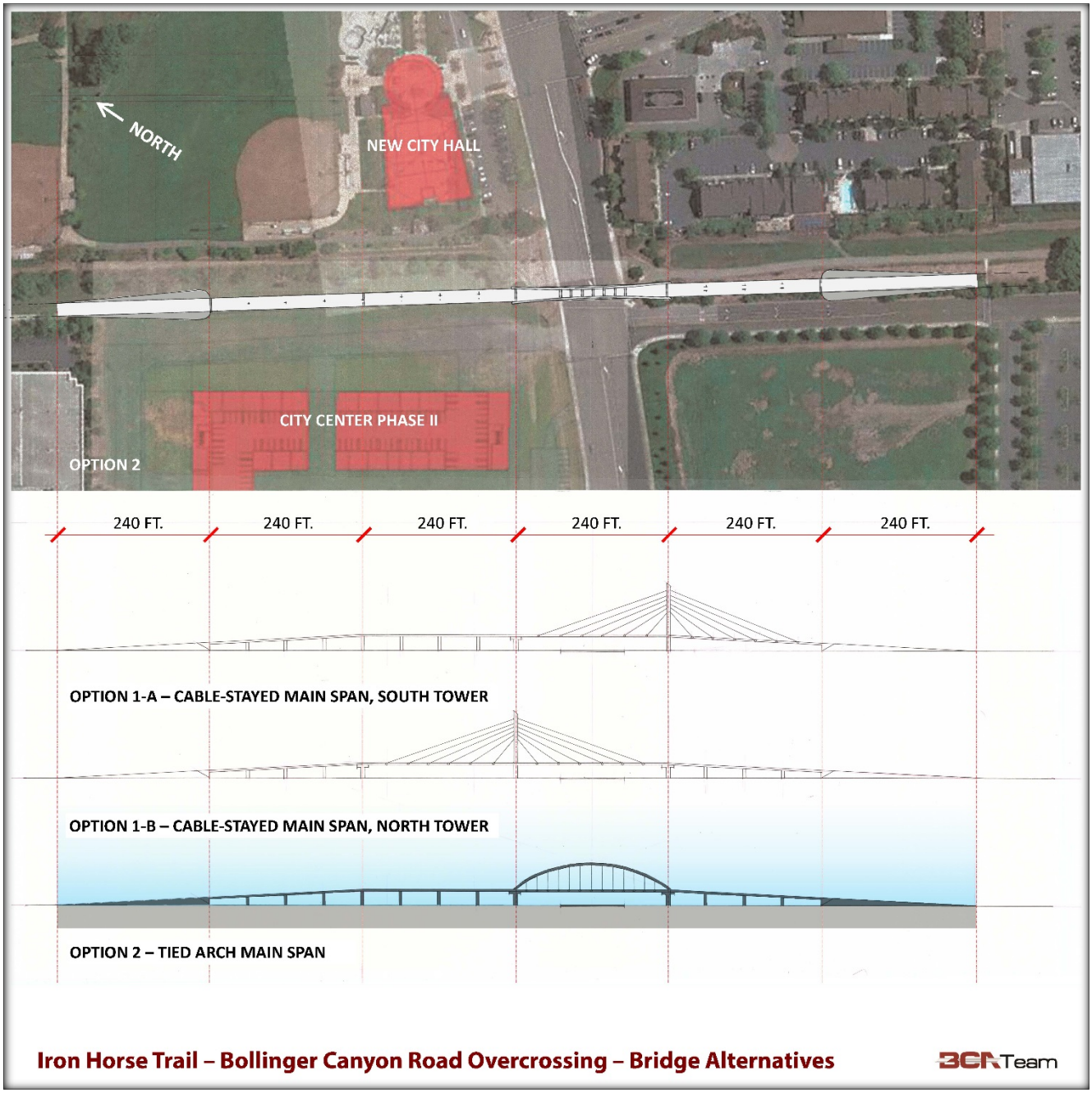
Bollinger Canyon Road / Option 1-B – Cable-Stayed – A-Frame Main Tower / North – looking east BERTeam

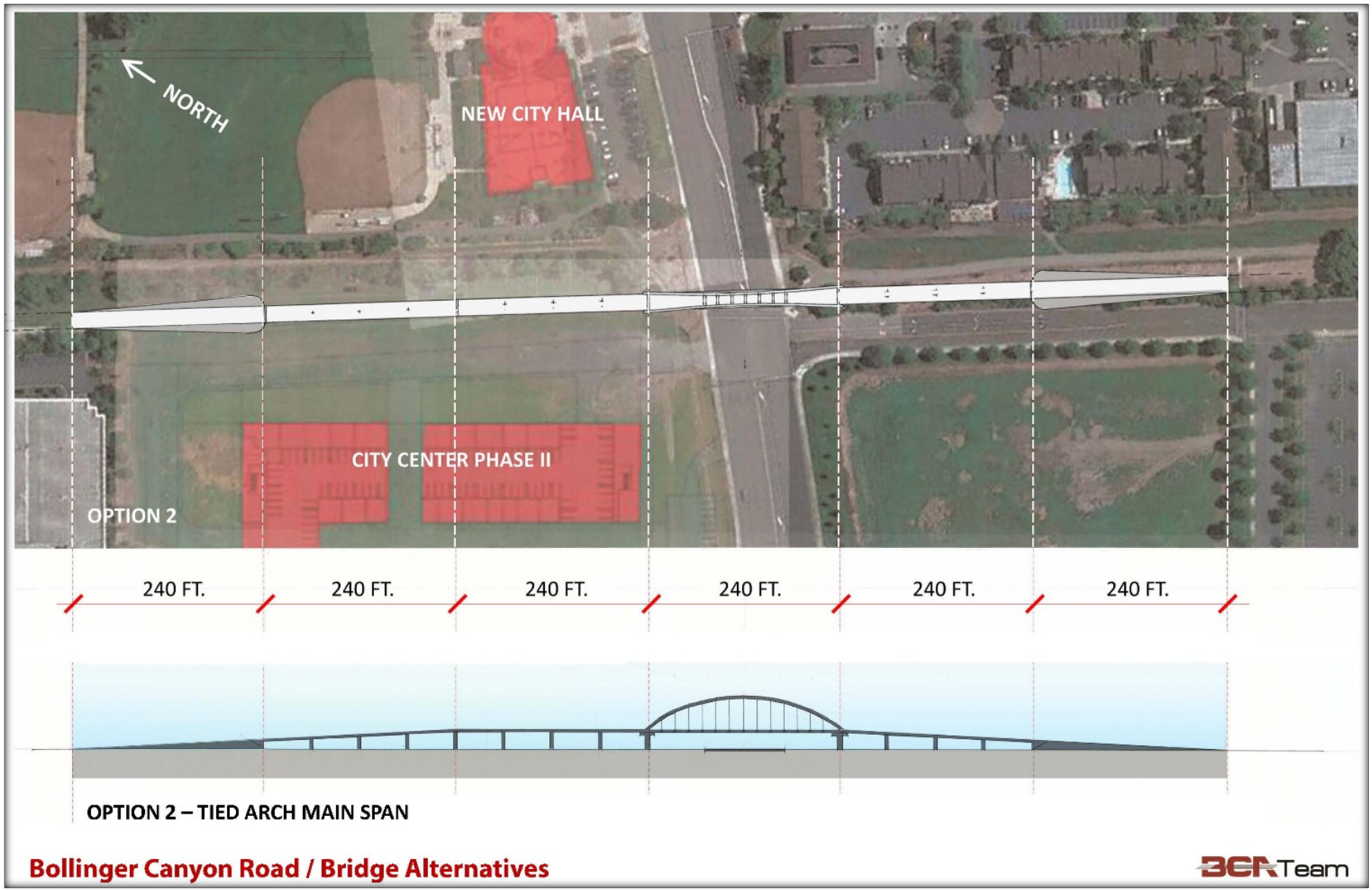
- **<u>Bollinger Canyon, Options 1-A and 1-B</u> (Cable-Stayed):**
  - <u>Tower Type 1</u>: Single-mast tower on center axis of bridge with widened deck passing around tower on both sides
  - <u>Tower Type 2</u>: Split-leg ("A-Frame") tower with deck passing between the legs





- **<u>Bollinger Canyon, Option 2 (Tied Arch):</u>**
  - South Approach / filled section – 240 feet
  - South Approach / column-supported – 240 feet
  - Main Tied Arch Span over road – 240 feet
  - North Approach / column-supported – 240 feet
  - Optional Extended North Approach / column-supported – 240 feet
  - North Approach / filled section – 240 feet
  - TOTAL – 1440 feet



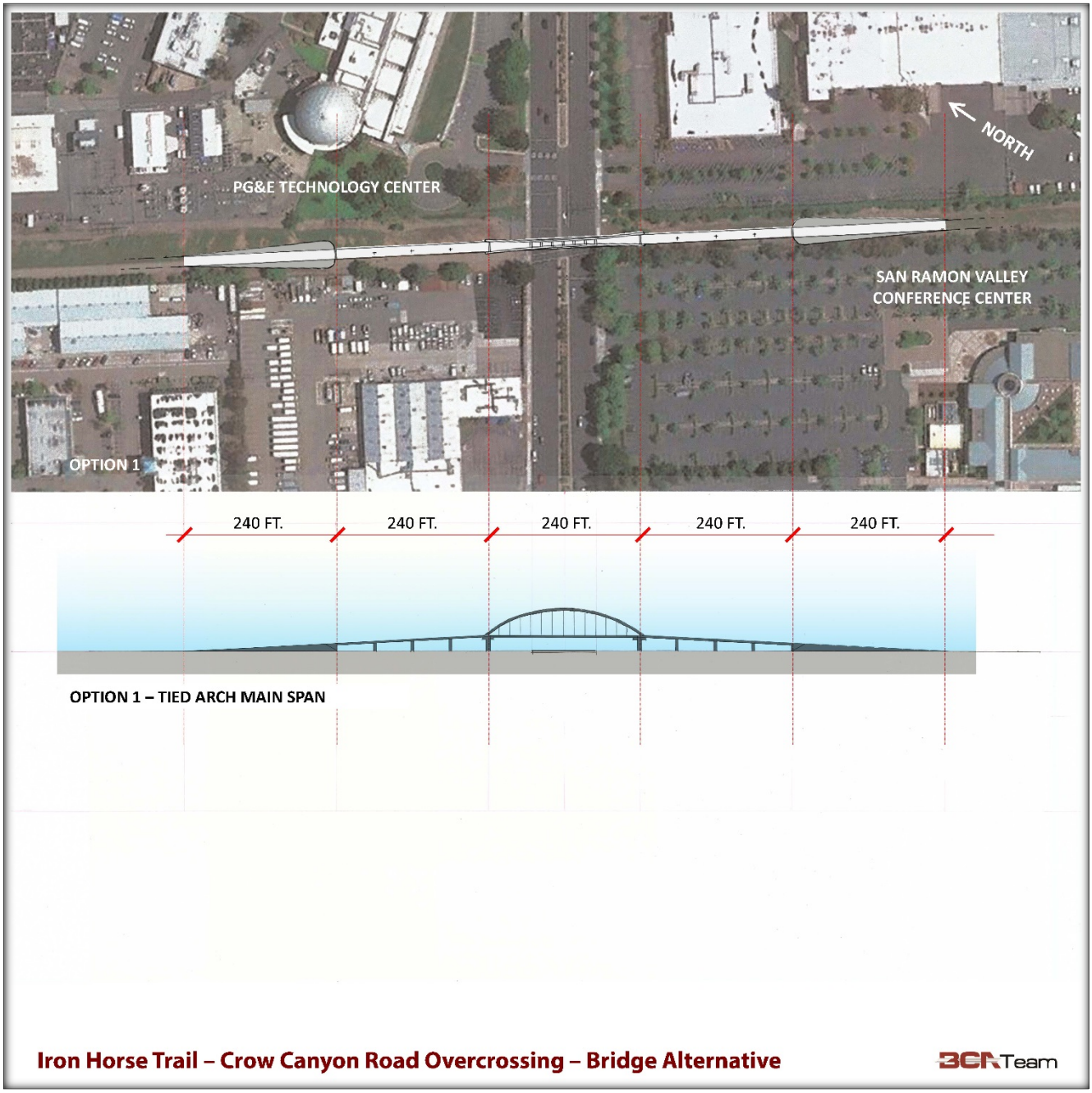

NORTH
NEW CITY HALL
CITY CENTER PHASE II
OPTION 2
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
240 FT.
OPTION 2 – TIED ARCH MAIN SPAN
Bollinger Canyon Road / Bridge Alternatives
BCR Team

Bollinger Canyon Road / Option 2 – Tied Arch – looking east

Bollinger Canyon Road / Option 2 – Tied Arch – looking west

Iron Horse Trail
Crow Canyon Road
Bridge Alternative Concepts

- **<u>Crow Canyon (Tied Arch):</u>**
  - South Approach / filled section – 240 feet
  - South Approach / column-supported – 240 feet
  - Main Tied Arch Span over road – 240 feet
  - North Approach / column-supported – 240 feet
  - North Approach / filled section – 240 feet
  - TOTAL – 1200 feet



Crow Canyon Road / Option 1 – Tied Arch – looking east

Crow Canyon Road / Option 1 – Tied Arch – looking west

Probable Cost Estimates

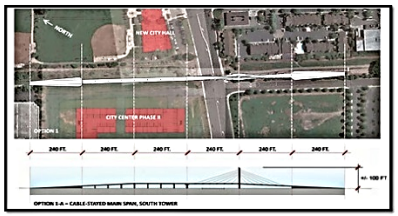
Preliminary estimates of probable cost for each of the proposed alternatives were developed to include probable utility and right-of-way costs. The cost estimates are inclusive of hard and soft costs in order to validate funding requirements for the construction of the projects. Although estimates at this stage were conceptual (or "ball park"), they played a critical role in the evaluative process by indicating the relative ranges of cost that the City is likely to encounter.

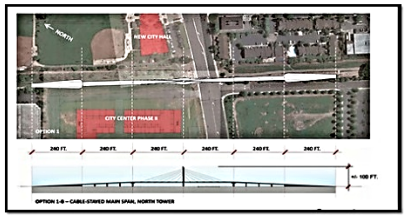
The attached estimate of probable construction costs is based on the conceptual plans and previous experiences in the construction of similar bridge structures. The reader is cautioned that these costs are approximate only and subject to revision based on further design refinement, variations in the economic climate and additions or reductions in the scope of improvements anticipated. The estimates are based on a set of assumptions including minimal conflicts with utilities and other unforeseen conditions. In the event that more conflicts are discovered during either design or construction, the cost of implementation of the crossings will increase proportionately. Because construction is not anticipated for 3 to 4 years, it is anticipated that the actual projects costs may be higher due to inflation, changes in design, changes in regulatory requirements, and other factors.

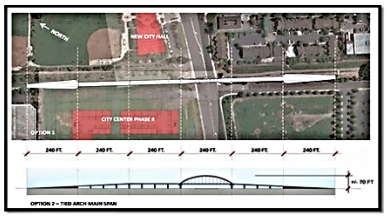
(On Next Page)

Biggs Cardosa Associate Team's Opinion of Probable Cost for Iron Horse Trail Bridge Projects At Bollinger Canyon Road

20' Wide X 1440' Long



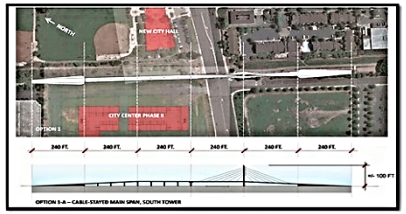


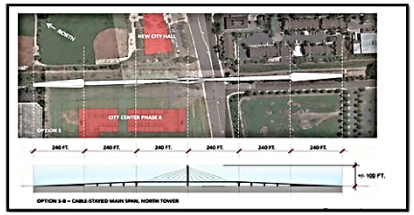


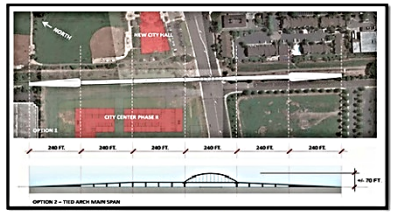
Item		Cable Stayed w/ South Tower Alt 1A	Cable Stayed w/ North Tower Alt 1B	Tied Arch Alt 2
Main Span Bridge - 20' wide X240' long		$3,120,000	$3,120,000	$2,880,000
Back Span Bridge - 20' wide X240' long		$3,120,000	$3,120,000	$0
South ramp viaduct approach structure– 20' wide X240' long		$0	$1,440,000	$1,440,000
South ramp fill- 20' wide X240' long		$533,333	$533,333	$533,333
North column-supported extension – 20' wide X 240 feet		$1,440,000	$0	$1,440,000
North ramp viaduct approach structure- 20' wide X240' long		$1,440,000	$1,440,000	$1,440,000
North ramp fill-- 20' wide X240' long		$533,333	$533,333	$533,333
Connection to City Center		$500,000	$500,000	$500,000
Stairs		$600,000	$600,000	$600,000
New utilities and lighting on bridge-1440'		$576,000	$576,000	$576,000
Others (allowance for items noted below):		$2,000,000	$2,000,000	$2,000,000
Mobilization				
Roadway and trail modifications				
Utility relocations and related roadwork				
New utilities and lighting on site				
Landscaping (Hardscape) including paving & drainage				
Landscaping (Softscape) including planting, irrigation & site amenities				
Mitigation for environmental ...if any				
ROW				
Construction Cost		$13,862,667	$13,862,667	$11,942,667
Time Related Overhead	10%	$1,386,266.67	$1,386,266.67	$1,194,266.67
Contingencies	25%	$3,465,666.67	$3,465,666.67	$2,985,666.67
Total Opinion of Probable Construction Cost		$18,714,600	$18,714,600	$16,122,600
Soft costs for the above (preliminary & final design and support and CM during construction) in % of opinion of construction cost	40%	$5,545,067	$5,545,067	$4,777,067
Total Opinion of Probable Cost		$24,259,667	$24,259,667	$20,899,667
SAY		$25 M	$25 M	$21 M
Total $/SF		$842	$842	$726
		• TOTAL – 1440 feet • Net width = 20 feet • Vertical Clearance over road = 17 to 18 feet	• TOTAL – 1440 feet • Net width = 20 feet • Vertical Clearance over road = 17 to 18 feet	• TOTAL – 1440 feet • Net width = 20 feet • Vertical Clearance over road = 17 to 18 feet
Cost w/o soft cost= 20000000 /1440/20 = $/SF		$650	$650	$560

Biggs Cardosa Associate Team's Opinion of Probable Cost for Iron Horse Trail Bridge Projects At Bollinger Canyon Road

16' Wide X 1440 ' Long



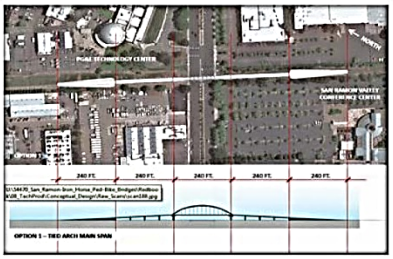




Item		Cable Stayed w/ South Tower Alt 1A	Cable Stayed w/ North Tower Alt 1B	Tied Arch Alt 3
Main Span Bridge - 16' wide X240' long		$2,496,000	$2,496,000	$2,304,000
Back Span Bridge - 16' wide X240' long		$2,496,000	$2,496,000	$0
South ramp viaduct approach structure-- 16' wide X240' long		$0	$1,152,000	$1,152,000
South ramp fill- 16' wide X240' long		$426,667	$426,667	$426,667
North column-supported extension – 16' wide X 240 feet		$1,152,000	$0	$1,152,000
North ramp viaduct approach structure- 16' wide X240' long		$1,152,000	$1,152,000	$1,152,000
North ramp fill-- 16' wide X240' long		$426,667	$426,667	$426,667
No Connection to City Center		$0	$0	$0
Stairs		$600,000	$600,000	$600,000
New utilities and lighting on bridge-1440'		$576,000	$576,000	$576,000
Others (allowance for items noted below):		$2,000,000	$2,000,000	$2,000,000
Mobilization				
Roadway and trail modifications				
Utility relocations and related roadwork				
New utilities and lighting on site				
Landscaping (Hardscape) including paving & drainage				
Landscaping (Softscape) including planting, irrigation & site amenities				
Mitigation for environmental ...if any				
ROW				
Construction Cost		$11,325,333	$11,325,333	$9,789,333
Time Related Overhead	10%	$1,132,533.33	$1,132,533.33	$978,933.33
Contingencies	25%	$2,831,333.33	$2,831,333.33	$2,447,333.33
Total Opinion of Probable Construction Cost		$15,289,200	$15,289,200	$13,215,600
Soft costs for the above (preliminary & final design and support and CM during construction) in % of opinion of construction cost	40%	$4,530,133	$4,530,133	$3,915,733
Total Opinion of Probable Cost		$19,819,333	$19,819,333	$17,131,333
Say		**$20 M**	**$20 M**	**$17 M**
Total $/SF		$860	$860	$744
		• TOTAL – 1440 feet • Net width = 16 feet • Vertical Clearance over road = 17 to 18 feet	• TOTAL – 1440 feet • Net width = 16 feet • Vertical Clearance over road = 17 to 18 feet	• TOTAL – 1440 feet • Net width = 16 feet • Vertical Clearance over road = 17 to 18 feet
Cost w/o soft cost= 20000000 /1440/16 = $/SF		$664	$664	$574

BCA

Biggs Cardosa Associate Team's
Opinion of Probable Cost
for Iron Horse Trail Bridge Projects
At Crow Canyon Road
16' Wide X 1200' Long



Item		Tied Arch
Main Span Bridge -16' wide X240' long		$2,304,000
North ramp viaduct approach structure - 16' wide X240' long		$1,152,000
North ramp fill - 16' wide X240' long		$426,667
South ramp viaduct approach structure - 16' wide X240' long		$1,152,000
South ramp fill - 16' wide X240' long		$426,667
Stairs		$600,000
New utilities and lighting on bridge-1200'		$480,000
Others (allowance for items noted below):		$2,000,000
Mobilization		
Roadway and trail modifications		
Utility relocations and related roadwork		
New utilities and lighting on site		
Landscaping (Hardscape) including paving & drainage		
Landscaping (Softscape) including planting, irrigation & site amenities		
Mitigation for environmental ...if any		
ROW		
Construction Cost		$8,541,333
Time Related Overhead	10%	$854,133
Contingencies	25%	$2,135,333
Total Opinion of Probable Construction Cost		$11,530,800
Soft costs for the above (preliminary & final design and support and CM during construction) in % of opinion of construction cost	40%	$3,416,533
Total Opinion of Probable Cost		$14,947,333
Say		$15 M
Total $/SF		$779

Cost w/o soft cost= 11500000 /1200/16 = $/SF $601

Crow Canyon (Tied Arch):

- TOTAL – 1200 feet
- Net width = 16 feet
- Vertical Clearance over road = 17 to 18 feet

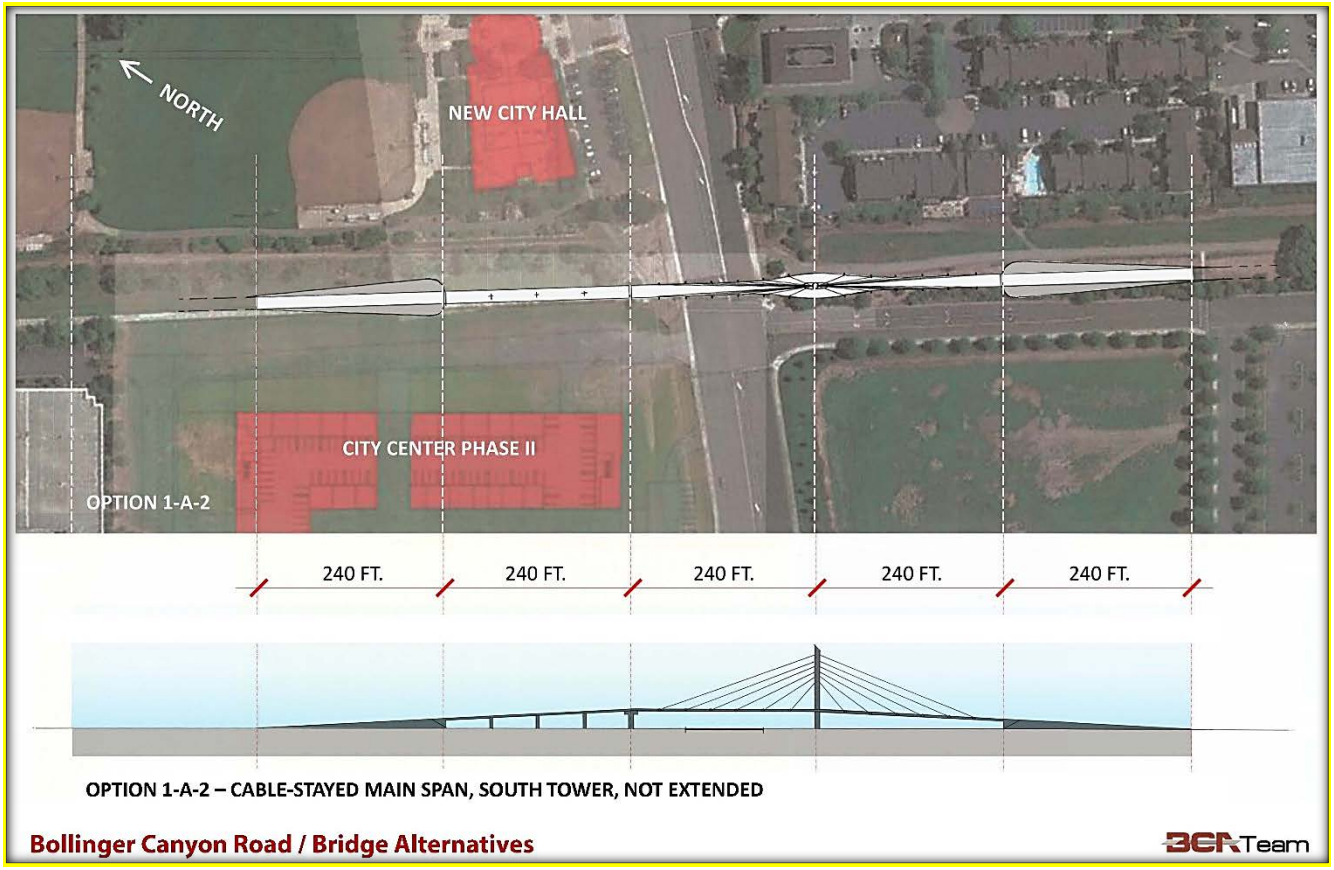
Preferred Bridge Type & Preliminary Estimate of Probable Costs

City Council Action – July 14, 2015

At the July 14, 2015 Council meeting, San Ramon City Council accepted the Community Engagement/Outreach Final Report and chose the following preferred bridge types and span configurations to be advanced to the next phase of planning and design. Span segments are listed in order from south to north.

- **Bollinger Canyon** (Cable-Stayed, tower on south side of street):
  - South Approach filled section – 240 feet
  - South Approach / cable-stayed back span – 240 feet
  - Main Cable-Stayed Span over road – 240 feet
  - North Approach / column-supported – 240 feet
  - North Approach / filled section – 240 feet
  - TOTAL – 1200 feet

  Note: Deck width and single-mast and split-leg tower options will be studied further in the next phase of planning and design.

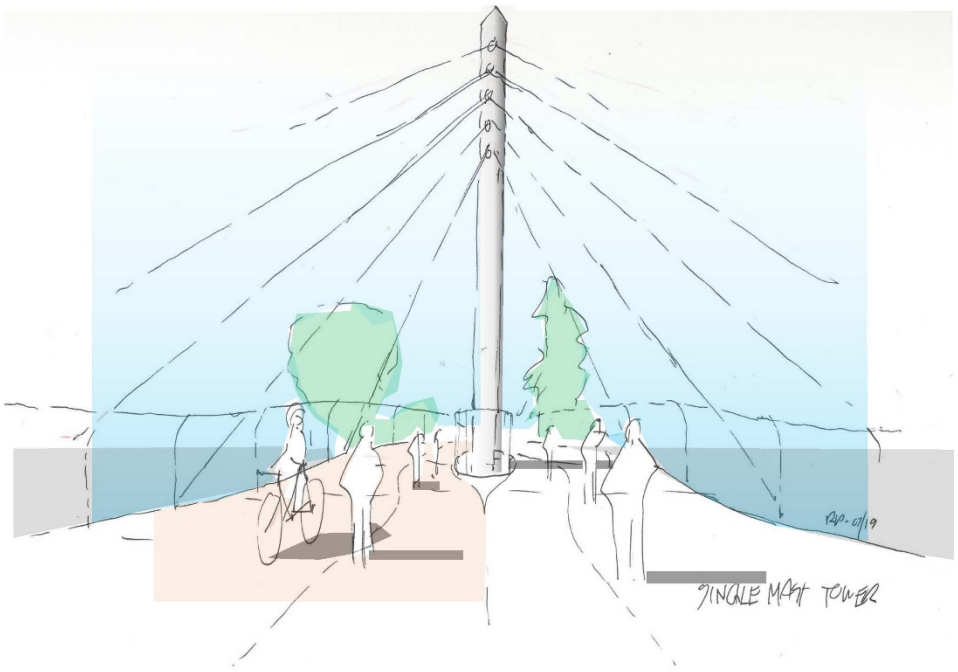


Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking east BCR Team

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking east BCR Team

Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking west BERTeam

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking west BERTeam



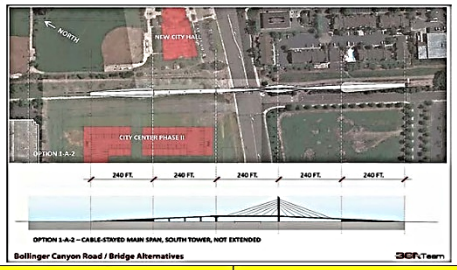
Bollinger Canyon Road / Options 1-A, 1-B – Single Mast Tower from Deck

BCR Team

Bollinger Canyon Road / Options 1-A, 1-B – A-Frame Tower from Deck

BCR Team

Biggs Cardosa Associate Team's
Opinion of Probable Cost
for Iron Horse Trail Bridge Projects
At Bollinger Canyon Road
16' or 20' Wide X 1200' Long

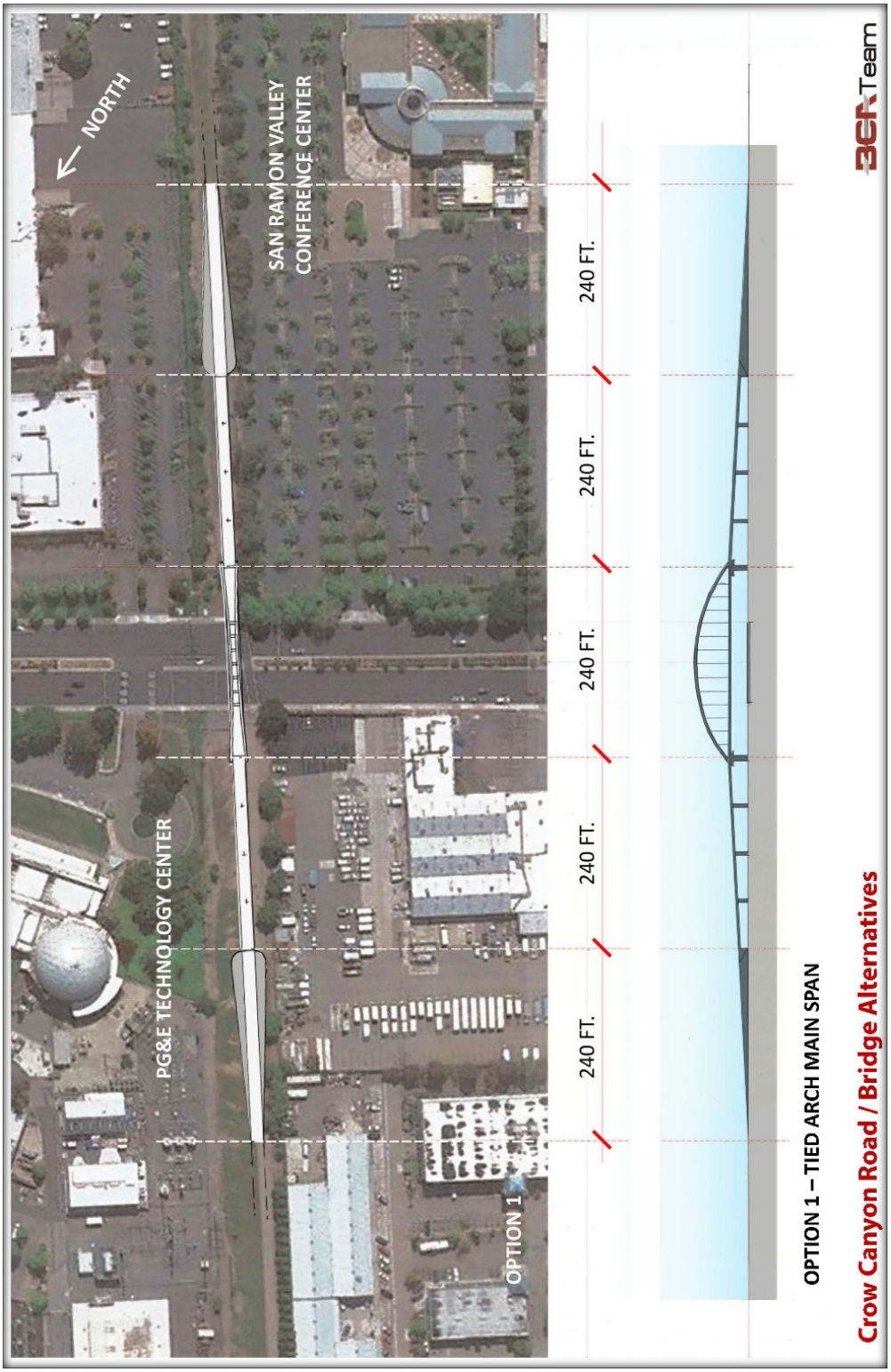


Item		Cable Stayed w/ South Tower 20' Wide by 1200' Long	Cable Stayed w/ South Tower 16' Wide by 1200' Long
Main Span Bridge		$3,120,000	$2,496,000
Back Span Bridge		$3,120,000	$2,496,000
South ramp viaduct approach structure		$0	$0
South ramp fill		$533,333	$426,667
North ramp viaduct approach structure		$1,440,000	$1,152,000
North ramp fill		$533,333	$426,667
No Connection to City Center		$0	$0
Stairs		$600,000	$600,000
New utilities and lighting on bridge		$480,000	$480,000
Others (allowance for items noted below):		$2,000,000	$2,000,000
Mobilization			
Roadway and trail modifications			
Utility relocations and related roadwork			
New utilities and lighting on site			
Landscaping (Hardscape) including paving & drainage			
Landscaping (Softscape) including planting, irrigation & site amenities			
Mitigation for environmental ...if any			
ROW			
Construction Cost		$11,826,667	$10,077,333
Time Related Overhead	10%	$1,182,666.67	$1,007,733.33
Contingencies	25%	$2,956,666.67	$2,519,333.33
Total Opinion of Probable Construction Cost		$15,966,000	$13,604,400
Soft costs for the above (preliminary & final design and support and CM during construction) in % of opinion of construction cost	40%	$4,730,667	$4,030,933
Total Opinion of Probable Cost		$20,696,667	$17,635,333
Say		$21 M	$18 M
Total $/SF		$862	$919

BCA

• TOTAL – 1200 feet	• TOTAL – 1200 feet
• Net width = 20 feet	• Net width =16 feet
• Vertical Clearance over road = 17 to 18 feet	• Vertical Clearance over road = 17 to 18 feet
Cost w/o soft cost= 20000000 /Leng/Width = $/SF	$665 / $709

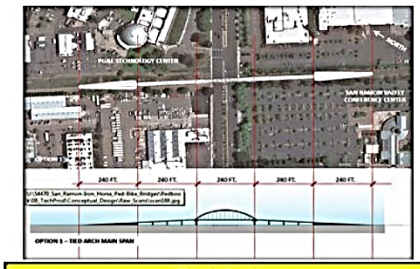
- **Crow Canyon** (Tied Arch):
  - South Approach / filled section – 240 feet
  - South Approach / column-supported – 240 feet
  - Main Tied Arch Span over road – 240 feet
  - North Approach / column-supported – 240 feet
  - North Approach / filled section – 240 feet
  - TOTAL – 1200 feet




Alcos
SPEED LIMIT 40
Crow Canyon Road / Option 1 – Tied Arch – looking west
BERTeam


Crow Canyon Road / Option 1 – Tied Arch – looking east
BERTeam

Biggs Cardosa Associate Team's
Opinion of Probable Cost
for Iron Horse Trail Bridge Projects
At Crow Canyon Road
16' Wide X 1200' Long



Item		Tied Arch
Main Span Bridge -16' wide X240' long		$2,304,000
North ramp viaduct approach structure - 16' wide X240' long		$1,152,000
North ramp fill - 16' wide X240' long		$426,667
South ramp viaduct approach structure - 16' wide X240' long		$1,152,000
South ramp fill - 16' wide X240' long		$426,667
Stairs		$600,000
New utilities and lighting on bridge-1200'		$480,000
Others (allowance for items noted below):		$2,000,000
Mobilization		
Roadway and trail modifications		
Utility relocations and related roadwork		
New utilities and lighting on site		
Landscaping (Hardscape) including paving & drainage		
Landscaping (Softscape) including planting, irrigation & site amenities		
Mitigation for environmental ...if any		
ROW		
Construction Cost		$8,541,333
Time Related Overhead	10%	$854,133
Contingencies	25%	$2,135,333
Total Opinion of Probable Construction Cost		$11,530,800
Soft costs for the above (preliminary & final design and support and CM during construction) in % of opinion of construction cost	40%	$3,416,533
Total Opinion of Probable Cost		$14,947,333
SAY		$15 M
Total $/SF		$779
Cost w/o soft cost= 11500000 /1200/16 = $/SF		$601

Crow Canyon (Tied Arch):
- TOTAL – 1200 feet
- Net width = 16 feet
- Vertical Clearance over road = 17 to 18 feet

Preferred Structures Summary

The following spread sheet summarizes the preferred bridge type and technical design requirements and assumptions.

Description	Bollinger Canyon Road	Crow Canyon Road
Structure Type and Spans	Main Bridge & South Back Span: Cable Stayed Structure Approach Structures: CIP/PS Box Girder Structure	Main Bridge: Steel Tied Arch Structure Approach Structures: CIP/PS Box Girder Structure
Spans	Main Bridge: 240 feet Span over Road & 240 feet South Back Span Approach Structures: Multiple spans, 80 to 100 feet long	Main Bridge: Simple Span, up to 240-feet long Approach Structures: Multiple spans, 80 to 100 feet long
Structure Depth	Main Bridge: 2.5-feet Approach Structures: 4-feet	Main Bridge: 2.5-feet Approach Structures: 4-feet
Clear Width	16 to 20-feet	16-feet
Bridge Cross Slope	Approx. 1%	Approx. 1%
Abutments	Cast-in-place reinforced concrete boxes with seat-type supports for approach structures	Cast-in-place reinforced concrete boxes with seat-type supports for approach structures
Bents	Cast-in-place concrete integral bent cap on concrete 3 to 4-foot diameter single column supports	Cast-in-place concrete integral bent cap on concrete 3 to 4-foot diameter single column supports
Falsework	Required for both the main bridge and ramp structures	Required for both the main bridge and ramp structures
Construction Staging	Staged construction of the main bridge and ramp structures is not required	Staged construction of the main bridge and ramp structures is not required
Vertical Clearance	17-feet minimum over local roads	17-feet minimum over local roads
Temporary Vertical Clearance	14-feet minimum over local roads	14-feet minimum over local roads
Barriers/Railings	Aesthetically Pleasing	Aesthetically Pleasing
Slope Paving	Not applicable	Not applicable
Approaches	Concrete sidewalk approaches to approach landings	Concrete sidewalk approaches to approach landings
Drainage	Deck drains discharging to adjacent roadway(s) or local drainage system	Deck drains discharging to adjacent roadway(s) or local drainage system
Joints	Expansion joints between main bridge and approach structure, and approach structure and abutments	Expansion joints between main bridge and approach structure, and approach structure and abutments
Utilities	Lighting conduit in superstructure, numerous existing utilities	Lighting conduit in superstructure, numerous existing utilities
Approximate Probable Cost	**$18 M to $21M**	**$15M**

Funding and Next Steps

With City Council selection of alternatives completed, the following steps will take place:

- Submittal of Summary Conceptual Design Report (this document), including supplementary exhibits of shortened northern approach alternatives for Bollinger Canyon overcrossing;
- Initiate Environmental Review Phase of project;
- Advocate for grant funding for bridge construction through Contra Costa Transportation Expenditure Plan;
- Submit and present Environmental Analysis updates to City Council;
- Adopt Final Environmental Analysis;
- Apply for grants through regional, state and federal programs; and
- Begin final design.

Attachments

Project Development Team Meetings

Prepared by: Biggs Cardosa Associates, Inc.
Date: 2/21/2014
2013148

MEETING RECORD OF MINUTES
FOR
SAN RAMON IRONHORSE
TRAIL OVERCROSSINGS

MEETING DATE: February 21, 2014 at 1:00 p.m.
LOCATION: San Ramon Engineering Conference Room
ATTENDEES: **See attached sign in sheet for names and organizations**

This meeting was the first PDT (Project Development Team) Meeting to officially kick off the project with all PDT members. The following issues and actions were noted:

ISSUES	NEXT ACTION
PDT Meeting #1:	
Lisa Bobadilla opened up the meeting by initiating introductions of all meeting attendees, then proceeded to discuss the project status: • **Project Status** 1. Introductions: Team, project, stakeholders 2. Background information / updates a. In 2007/08 the City received a federal grant $100k that was used to develop a corridor concept plan which identified 3 overcrossings at 3 locations along IronHorse Trail, 2 of which are in San Ramon: Bollinger Canyon Rd & Crow Canyon Rd. b. Biggs Cardosa was a subconsultant to the Callander Associates development team for that Concept Plan. After the Plan was circulated to the City, the County, the Park District, the Iron Horse Trail Advisory Committee and a consensus was reached that the findings in the Plan were acceptable and the project could move forward. c. The trail is not owned by the City, it is owned by the Park District • **Funding:** In 2009, 'Measure J' funding became available but the process of how Cities received funding wasn't yet developed. Once process was developed, a call for projects went out in 2012. San Ramon submitted 3 projects for the 'Measure J' Transportation for Livable Communities (TLC) program & received funding for all three: 1. Landscape improvements along the Iron Horse Trail ($360k in funding) 2. San Ramon Valley Transit Connectivity & Access Study 3. Bike/Pedestrian Overcrossing ($620k in total funding with $200.7k being used for this phase of public outreach)	

ISSUES	NEXT ACTION
• Identified **two goals** for this phase of the project: 1. City council to provide their input on what they would like to see built at Bollinger Canyon Rd (BCR) & Crow Canyon Rd (CCR). Lisa Bobadilla states "at the end of day, when funding becomes available, the priority for San Ramon is to build an overcrossing at BCR". 2. City input to develop 5 initial options that will be put on the City e-government system which will be voted down to the top 3, which will be taken to the City Council to identify one preferred option for each location. Estimated time frame for this phase of the project is 12-18 months. • In order to get to that point, the community needs to be engaged first to start developing concepts and then input is needed from the Park District, Contra Costa County, East Bay Regional Park District on a circulated preferred alternative for each location. • City Center Update 1. Location of City Hall changing to be located in Central Park where the basketball courts are currently located. • Metropolitan Transportation Commission (MTC) has designated the area a Priority Development Area (PDA): 1. PDA is tied to pedestrian / bicycle use and the City has priority to receive funding. Mahvash Harms introduced all consultant team members and their roles for this project. Rick Phillips then gave an overview of the urban development display boards. The exhibit displayed view corridors and different opportunities available for consideration that may guide the preliminary design of each intersection, for example the looks of the bridges as they relate contextually to the surrounding area; the functionality of the bridges relative to the use of each intersection; the proposed circulation of the adjacent development. • Mahvash Harms states that the two proposed bridges can have mutual elements that tie them together or they can stand alone. • While Rick Phillips discusses the different movements and elements of the BCR development area, Lisa Bobadilla says the City Council & Mayor envision that the bridge at BCR should serve as a signature statement for the City. • Casey Hildreth states that each intersection has opportunities for flow across both direction (east-west and north-south). Lisa Bobadilla & Brian Bornstein confirm that the City wishes to remove the at-grade crossing at BCR with the installation of the overcrossing. Pedestrians will be able to use the at-grade crosswalk at Market Place and Camino Ramon. • Chris Weeks stresses the need to incorporate the trail as a whole to feel as a part of the Bishop Ranch development so users from each can freely experience the development and trail.	

ISSUES	NEXT ACTION
• Carrie Ricci states that a lot of communities like to see history tied to a project, which leads to a discussion about possibly incorporating historical features along the trail Casey H. discusses the Public Outreach (PO) approach for the project. • Intent is to take a broad approach (versus giving specifics) to avoid having the same small group of people (public) involved throughout the entire PO process. • To have a walking tour to be visible and let people know about all available updates: Meant to be an informal and engaging process. • To have a Design Charrette o Casey Hildreth asks what level does the PDT team wants to take the charrette to. With respect to the parameters of the design charrette he says the options include being more of a 1 on 1 process?; or have a larger group with more detailed concepts & separate by technical ability; separate by site? o This leads to an initial design for the public input to be able to take to Council ▪ Farmers Market outreach ▪ Meeting with neighborhood associations o Ultimately leads to a "short list" for the Council Lisa Bobadilla takes this opportunity to ask the PDT stakeholders for their feedback regarding the public approach: • Jim Townsend cautions on expectations from the public if the question "what do you want?" was asked, and how it would relate to scope creep. He also offered a potential alternative of developing a set of baseline parameters to give an idea of such things as layout, estimated cost, a set of requirements that need to be met, and so on. • Carrie Ricci asks about the size of the public input process: more of a City Council input or more "out to the general public"? Casey Hildreth states "it wouldn't be completely wide open to the public and would have some type of constraints to the process." But the intent is to get early input in order to be able to say that concerns have been thought through from the start and ensure that a "winning design" begins early on in this phase. • Josh Mello asks the City for their input on the reaction from the public on this project. Lisa Bobadilla states that it has been positive overall.	PDT to decide what parameters will define the design charrette

ISSUES	NEXT ACTION
• Jim Townsend shares his opinion that "the key improvements will be to vehicular users along BCR." Lisa Bobadilla reminds the team that there are a number of school children that use the trail because of the close proximity of the schools to the trail, with Iron Horse Middle School having direct access located adjacent to Bollinger, so that the project improvements are definitely tied to safety of the trail users. • Mahvash Harms asks what the message is that we want to go out to the public with. Casey Hildreth states that the message should be defined beginning with the walking tour and be consistent as we proceed forward from that point on. Carrie Ricci speaks to her role as a liaison to the Iron Horse Trail Advisory Committee, made up of 9 representatives from the Park District and each unincorporated community or City along the trail. They meet quarterly and like to provide recommendations on anything that is related to the Iron Horse Trail corridor. She then shares that in her experience they are positive about projects such as this but do like to provide input. She illustrates examples of what would be concerns. • Carrie will be the point of contact relating to all utilities within the corridor • She explains that the committee doesn't make decisions, they make recommendations. • Brian Bornstein states that we should identify those quarterly meetings and program them into the development. Lisa Bobadilla states that the City definitely wants a design charrette but with parameters (limits) with what is presented to the public Chris Weeks suggests doing the public design charrette after or on the national Bike to Work Day, May 8th. It was agreed that would be the better opportunity to have a positive impact. Lisa Bobadilla says that the community center will need to be reserved and needs to be done soon to guarantee its availability. Chris Truebridge asks if all of the project can be done within the existing right of way. He says if not, then it is an issue with Sunset because they own the adjacent "open space" and would affect plans that are already approved & the existing permits. The original study has it to stay within the existing ROW. Brian Bornstein brings up the restriction of needing to provide for future light rail. • Carrie Ricci shares with the team that there is an attempt to remove the requirement of allowing for future light rail / transit. She said the County lobbyist, Mark Watts, is working on it at the state level. She said there might be an update in 3 to 4 weeks, and that for now it is trying to be approved through the California Transportation Commission (CTC).	Carrie to let the PDT team know when the quarterly meetings will be held. BCA to modify project schedule to include / identify quarterly meetings PDT to discuss schedule and decide which quarterly meeting to attend. ALTA to draft a list of possibilities for the charrette, to try to identify the parameters for the PDT to agree on. BCA will modify the project schedule to show Bike To Work Day as the target date for going out with the public charrette Lisa to look into reserving Community Center Carrie to provide an update on the efforts of the County lobbyist

ISSUES	NEXT ACTION
Chris Weeks discusses his role as director of transportation for Bishop Ranch. He gives some examples of the types of considerations the project should have: • Trail users perspective: give clear definition of uses • Vehicular / drivers perspective: relieve existing problems that create tension at the BCR at-grade crosswalk • Include improvements that tie in to the overall project / future: inclusion of amenities that each user type can take advantage of; historical features along the trail • Lessons we can learn from other bridges along the trail (both good and bad decisions) and bring to this project • Encourage all modes Chris Truebridge discusses his role and says it is more of a "big picture" and shares the following: • He is currently facilitating the City Hall design which should be ready to be shared with the public in 3 weeks, approximately March 11th. • The City Center design should be ready by a mid-year (June) timeframe. • He would want the bridge to be consistent with the overall design from Sunset. • He and Carrie Ricci worked on developing landscaping concepts for the trail that were stalled due to several issues. So Sunset took a step back and is allowing the City to resolve them. • Mentioned a funding opportunity, a transportation bond that is coming up in the following election and the possibility of proposing this project. Rick Phillips states that he would be very interested in learning as much as possible from Sunset about the location move of the new City Hall and the significant impact and changes it represents with respect to the circulation of the area: There could be some potential blockages of circulation between the retail corridor & City Hall if not designed properly. Therefore it is important to understand the relationship that Sunset sees between the two areas. • Chris Truebridge says the ramp was a concern in the design of the City Hall and that it is something to consider, and agrees with Rick Phillips that there needs to be some further discussion. Ramps are estimated to be 400' +/- for compliance with ADA	

ISSUES	NEXT ACTION
The date for the walking / biking tour was discussed and Casey Hildreth brought up the timing of it relative to what level of information for the project concepts and/or the Sunset development plans would be available to share with the public and what (if any) copies the team would bring to it. Chris Truebridge replies about the timeline and what the process would be, says Sunset's goal is always to be in "substantial compliance". Relative to the timeline, he was asked if the EIR needed changing and Chris Truebridge says there might need to be an addendum because some of the traffic uses have been changed, but nothing related to the trail. It was agreed that the date of the Walking/Bike Tour should change and be tied to the public outreach kick-off (as opposed to having the tour for the sake of the PDT members, who already know the trail very well). The Walking/Bike Tour will serve as more of a promotional event, possibly with some members of the PDT available to answer any questions from the public. Date will be identified when the team is closer to having the design charrette ready. **Funding:** Casey Hildreth asks about other funding opportunities that might be known at this time. Jim Townsend speaks about the schedule of upcoming funding opportunities: • Active Transportation funding done every two years, with the first call for projects being in about a month thus this project will not make it in time • CCTA is considering fast tracking a reauthorization of Measure J, which is a better opportunity and is fairly confident that the District would support this project among a short list of others • Park district hasn't gone after any grade separation projects but has been supportive of the Cities that have done so • Lisa Bobadilla discusses other future opportunities that may be available that would involve San Ramon, Dublin & Pleasanton, going after federal money in about a two year timeframe (Tiger Grant). The target audience for the design charrette was briefly discussed and it was agreed that the list that was developed for the proposal would be a good starting point and would be sent out to all PDT members for their review. Potential target audience members include the IHT Advisory Committee, Chamber of Commerce, HOA's and the San Ramon Valley Unified School District. Once refined, it will be used for the Design Charrette. Chris Truebridge says the school district will be very interested in this project because they are thinking of changing the school boundaries. Next meeting: An email will be sent out for possible dates in mid March.	BCA to send out list for the target audience to the PDT members for their review

SIGN IN SHEET **DATE:** 2/21/14

San Ramon Ironhorse Trail Overcrossings

	Name	Initials	Organization	Contact: Email and Number	
1	Lisa Bobadilla	LB	City of San Ramon	lbobadilla@sanramon.ca.gov	925-973-2651
2	Theresa Peterson	TP	City of San Ramon	tpeterson@sanramon.ca.gov	925-973-2685
3	Brian Bornstein	BB	City of San Ramon	bbornstein@sanramon.ca.gov	925-973-2686
4	Jim Townsend		EB Regional Park District	Jtownsend@ebparks.org	510-544-2602
5	Carrie Ricci	CR	Contra Costa County	cricc@pw.cccounty.us	925-313-2235
6	Brad Beck		CCTA	bbeck@ccta.net	925-256-4726
7	Chris Truebridge	CT	Sunset Development Co.	ctruebridge@bishopranch.com	925-866-0100
8	Mahvash Harms	MMH	Biggs Cardosa Associates	mharms@biggscardosa.com	415-986-1911 x1128
9	Carlos Vasquez	CV	Biggs Cardosa Associates	cvasquez@biggscardosa.com	408-296-5515 x1148
10	Casey Hildreth	CH	ALTA Planning	caseyhildreth@altaplanning.com	510-540-5008 x113
11	Rick Phillips	RP	~~HNTB~~ Corp	RPhillips@HNTB.com	510-208-4599
12	Gordon Sweet		BKF Engineers	GSweet@BKF.com	925-396-7736
13	CHRIS WEEKS	CW	Sunset Development	*See Card #	"
14	Josh Mello	JM	Alta Planning + Design	joshmello@altaplanning.com	
15	~~Carrie Ricci~~	~~CR~~	~~Contra Costa County~~	~~cricc@pw.cccounty.us~~	~~925-313-2235~~
16					
17					
18					
19					
20					
21					
22					
23					

Prepared by: Biggs Cardosa Associates, Inc.
Date: 5/9/2014
2013148

MEETING RECORD OF MINUTES
FOR
SAN RAMON IRONHORSE
TRAIL OVERCROSSINGS

MEETING DATE: May 9, 2014 at 1:00 p.m.
LOCATION: San Ramon Engineering Conference Room
ATTENDEES: **See attached sign in sheet for names and organizations**

This meeting was the second PDT (Project Development Team) Meeting to review past action items and discuss the Design Charette with all PDT members. The following issues and actions were noted:

ISSUES	NEXT ACTION
PDT Meeting #2:	
The meeting opened up with general introductions of all attendees, then proceeded to discuss project updates: • **City Outreach:** Lisa Bobadilla gives an update on the outreach efforts by the City and says that the Workshop flyer has been posted at numerous sites, including the websites for the City, the 511 Contra Costa, CCTA, the County and the Park District. Flyer also has been tweeted by the City, placed in the Council Chambers and all City public facilities. It has also been sent to all council members, the City manager, Bishop Ranch, and it will go out to transportation advisory committee members next week, who will be asked to disseminate the flyers to their local residents. 1. An oversight was noted that the CCTA logo wasn't included in the flyer, and that it must be included in all documents in the future because the CCTA is the main funding agency. Brad Beck from the CCTA has a high resolution copy of the logo to include in all future material for the design charette. • **City Hall Project:** The project was introduced to Council in March. Chris Truebridge from Sunset Development noted that the latest plans will be taken to the Planning Commission meeting on the same night as the design charette, May 20th. The plans that were taken to Council in March are public and available through the City. He also stated that the plans going to the Planning Commission would not change much from what was shown to Council. Lisa states that she can forward the plans to the design team. Mahvash Harms asks what level the plans are at, Chris states that they are at the 85% level phase. Chris states that the plans that Lisa has won't be the most current and the most current will be ready on Tuesday of the following week (5/13). • **IHT Landscape Improvement Project:** The City is taking the lead on this project and is moving forward on some components. Lisa will provide the team with the timeline of work to be done. City has omitted improvements at locations	Brad Beck to send a high resolution copy of the CCTA's logo. Lisa will forward the 85% level plans to the design team after she obtains them from Sunset after 5/13. Lisa will send timeline and any renderings / plan that involve the landscape improvement program to team.

ISSUES	NEXT ACTION
of the overcrossings to avoid repeating work effort in the future and spending time / resources now. • **Design Charette / Workshop:** The City has the room and required equipment reserved. • **Bishop Ranch Transportation:** Chris Weeks states that they are in the middle of launching their bike share program, one way sharing of bikes, by mid June. This might be one component of the users of this pathway project. He would be happy to share all the details & information as it rolls out. He also states that they are working on a concept for a portable parklet, in order to have a portable educational station. 1. Chris would like to get this project information on their newsletter. Asks if there is a PDF that he can link to and Lisa says that the City's website has it. Chris will create a link on their website.	
• **City Center Update:** Chris Truebridge says the revised City Center plans will be public on June 10th, at a public informational presentation to the City Council. He says the area the project team is most interested in is called BR3A, an empty lot adjacent to the trail. Sunset's focus is on phase 1, the retail component of their project, therefore what is presented to Council on the 10th will only be a massing study and no elevations or specific architecture will be included (they will be in phase 2). 1. It will be a 3 story residential complex on top of a garage, with some retail space. He states that approximately speaking, there is a 90' height limitation, so there will be setbacks for shadows on the trail. They will most likely have to go through a development plan amendment which will most likely take 6 months. 2. Rick Phillips asks if they have a general idea about access points and uses for the sides of the building, to which Chris says they don't and says it will be more like a place holder when it is presented to Council. 3. Josh Mellow asks if Sunset knows where the building footprint will be. Chris says yes because they have site setbacks. Josh says that for the Charette it would be helpful to have a parcel map that shows the required setbacks. Chris says he will look into what he can provide.	Chris Weeks to create a link within the Bishop Ranch website to the City website page where the project information is located. Chris Truebridge will look into what Sunset has with respect to a parcel map that shows setback limitations and provide to the team for use in developing Charette presentation material.
• Chris Weeks asks if the City has reached out to the bike coalition, Bike East Bay. Lisa will reach out to them about the project. She also says they have reached out to Iron Horse Middle School and the School District and will remind them. • **County Update:** Carrie Ricci states that: 1. She provided survey that shows the transit corridor.	Lisa to reach out to Bike East Bay and Iron Horse Middle School

ISSUES	NEXT ACTION
2. A survey showing utilities should be available by Monday or Tuesday of the following week. 3. The Iron Horse Corridor Advisory Committee (IHCAC) met Wednesday 5/7 and the next meeting is tentatively schedule for the last Wednesday of July. However, that date might change and she will get back to the team once a firm date has been selected. The date might be moved up in order to discuss the Landscape Project. 4. The County's legislative advocate, Mark Watts, has met with Caltrans regarding the removal of the transit corridor requirement. Caltrans staff was in favor of working with County to go to CTC to remove or modify the requirement, or switch it out with a requirement that it will always stay as a trail corridor. Mark Watts will draft a letter to Caltrans asking them to go to the CTC asking them to remove the requirement. There is no defined timeline on the process. 5. She sent the workshop flyer to the IHCAC. • **Bike to Work Day Update:** Josh Mello updated the PDT on the activities that ALTA conducted at two stations along the Iron Horse Trail. He offered the following information: 1. There were approximately 100 trail users that were engaged regarding the project between the two stations, with the Bollinger Canyon Road location having the majority of those, approximately 75 people. 2. There was only one person who had a negative comment. 3. Quite a few people asked where the funding would come from and ALTA's response was that the source hasn't been determined yet but that it would likely be a combination of grant funding along with other sources. 4. Quite a few people complained about the existing signal timing at both locations. He suggests there are a few ways to improve the system in the interim and Lisa says that would be a good conversation to have with the City's senior Traffic Engineer. 5. Not a lot of opinions on the bridge look were given, the main questions were about when they would be constructed. The Walnut Creek overcrossings were referenced by almost all the users, especially at Ygnacio and Treat, but not a lot of concern about aesthetics. Most of the users seemed to be from Walnut Creek (not San Ramon residents) and Lisa says that local residents may have different opinions. Brian Bornstein states that	Carrie will provide a completed utilities survey to the team. Carrie will get a firm date on the next CAC meeting, tentatively scheduled for last Wednesday of July.

ISSUES	NEXT ACTION
it is interesting to get input from a diverse group of users because to some it is more about functionality and to others the aesthetics will be more of a factor. 6. Some comments about the desire for landscaping were taken and those people were told that there is currently a separate project addressing that. 7. There were quite a few complaints about the jog at Bollinger Canyon Road to get to the cross walk. **Design Charette Discussion on May 20th:** Lisa confirms with Josh that ALTA will have staff at the greeting table for the workshop, the City will also have a staff member to help greet people and collect contact information. They anticipate 4 to 5 staff members for the meeting, including an illustrator to perform real time drawing for mapping and visual preferences. Josh begins by identifying the four charette options that the City had previously chosen from a list of various options that ALTA had provided. 1. The **first activity will be a virtual site tour,** giving the trail user perspective and the motorist perspective. It can be done through the use of a variety of tools, such as google maps or a power point presentation and the idea is to walk the public through the various aspects of the project and the different interactions of the area. Lisa states that the 2009 feasibility study had a context map that can be used for this portion of the charette, it shows all the different land users, and might need to be updated for the charette. Josh adds that the history of the railroad corridor might want to be added to the discussion. Lisa suggests a discussion about the different roles by the agencies with respect to the trail, Josh says it will be incorporated into the history discussion. Chris Weeks states that it would also be good to discuss what is under the trail (in regards to utilities). Carrie Ricci asks if the Park District has "use counts" for the trail and Suzane Wilson from the Park District said they do and will contact Sean Dugan to get in touch with Jim Townsend in order to get that information to the team. Lisa also suggests a discussion to help people clearly understand what this project does for them, especially at the crossings. Josh suggests not discussing the removal of the at-grade crossing at this workshop, even though the PDT understands that it needs to happen, in order to avoid public animosity at such an early stage of the feasibility study. He further suggests that perhaps a question could be posed to the attendees to simply gauge the response. 2. The **second activity would be a brainstorming session,** asking people for their reaction to the virtual tour. There would be no right or wrong answers. The crowd would be	

ISSUES	NEXT ACTION
broken up into groups, Josh proposes four groups, and would be asked leading questions to get them to open up. After the breakout sessions, everyone would come back together and report back on the types of responses. Chris weeks suggests that the school be afforded the opportunity to provide input prior to the Design Charette since the meeting will be held at night. It was suggested that perhaps the children might get involved by providing drawings of the related project aspects (i.e. drawings of a bridge). Lisa said she will contact the Iron Horse Middle School principal.	Lisa to contact Iron Horse Middle School principal to discuss ways to include their input.
3. The **third activity would be collaborative map making**. This would be where a base map of the two intersections would be used to frame the discussion regarding site restrictions, usage of the intersections, help attendees relate what ideas they may have, and so on. Josh states that there would be two tables focusing on Crow Canyon and two focusing on Bollinger. People would be able to go to the table they would want to focus on. Rick Phillips suggests that it would be a good idea to allow time for people to be able to address both stations. The PDT agreed that this was a good idea because it is likely that people will have comments on both locations.	
4. The **last activity will be a visual preference survey**. This is where pictures of different overcrossings would be shown and attendees would be given some type of scoring / voting system that would allow them to share their preferences of different bridge aspects. Mahvash states that it is important to only show what is possible at this feasibility stage, so as not to misrepresent what is realistic. Josh says that it will be made clear and that the attendees will be told that we are not proposing to build any of the shown bridges but instead asked to give input on the different individual elements. Some other items to cover will be lighting elements and trail history stations along the trail. There will be about 10 to 15 different pictorial examples, which will include the Walnut Creek images. Lisa said some of the images from the feasibility study drew some good reviews from the City Council. Lisa will identify which of those images to use and let Josh know.	Lisa to identify which images from the feasibility study to use in the last activity and let Josh know.
5. The conclusion of the meeting will allow the group to come back together one last time and make sure people heard what was said and feel like they have given their input. Josh asks if the City will have staff on hand to intercept any people intent on derailing the event. City staff will handle any such people to deflect them away from the main group and allow them to vent.	

ISSUES	NEXT ACTION
Miscellaneous Discussions: • Lisa asks if refreshments would be served. It was agreed that the City will take the lead and provide refreshments. • Lisa will confirm that a lap top has been reserved and states that there is a screen already available in the room. Mahvash states that the team will bring backup material just in case of any unforeseen circumstances. ALTA will bring any other miscellaneous meeting material that will be required. • Sound system in the room is available, microphones are available (cordless or hand held). ALTA will determine what is needed and what will be used once they arrive and set up at the conference room. • Lisa asks if the meeting will be recorded, Josh states that ALTA staff will be taking notes as the meeting progresses. • Introductions at the start of the meeting will be handled by the City, and might be included in the power point presentation. Lisa will send the team the power point file that was used by the City previously • Power point will have 1 slide on project schedule so all team members have a rudimentary understanding in case questions come up from the public at the various tables; i.e., talking points for staff to answer questions from public. • Theresa states that at a minimum photos should be taken at the event. PDT agrees that photos should be taken. • Josh remembers that ALTA took pictures at Bike to Work Day that they will share with the City for their use. **Funding:** Lisa says this phase is already funded, and that the City has a portion of the funding for the next phase - preliminary engineering. • Also states that the City will be ready to seek a grant opportunity from the ATP next year. • CCTA will have a call for projects for TLC and Bike/ped. Brad Beck says that it may be towards the end of this year or the beginning of next year. **Project Schedule:** The project schedule will need to be updated when we get a firm date on the next IHCAC meeting, which is currently set for the last Wednesday of July. Lisa says that at some point in mid to late July, the City Council will be presented with design charette feedback. Then in the Fall, the council will get more feedback with input gathered at a Farmers market event and a general update prior to all information being posted on the City website. Lisa will give the exact date of the City Council meeting. The next PDT meeting will be August 27th at 1pm to 2:30pm. BCA to send out the outlook invitation. PDT meeting #4 date will be revised at the end of PDT meeting #3.	Lisa to send team the power point file to BCA Josh to send pictures to Lisa from the Bike to Work day activities. BCA to update schedule when dates are confirmed, for the next IHCAC meeting and Lisa will provide the date of the next City Council meeting. BCA to send PDT meeting #3 invite.

SIGN IN SHEET **DATE:** 5/9/14

San Ramon Ironhorse Trail Overcrossings

	Name	Initials	Organization	Contact: Email and Number	
1	Lisa Bobadilla		City of San Ramon	lbobadilla@sanramon.ca.gov	925-973-2651
2	Theresa Peterson		City of San Ramon	tpeterson@sanramon.ca.gov	925-973-2685
3	Brian Bornstein		City of San Ramon	bbornstein@sanramon.ca.gov	925-973-2686
4	~~Jim Townsend~~ Suzanne Wilson		EB Regional Park District	Jtownsend@ebparks.org	510-544-2602
5	Carrie Ricci		Contra Costa County	cricc@pw.cccounty.us	925-313-2235
6	Brad Beck		CCTA	bbeck@ccta.net	925-256-4726
7	Chris Truebridge		Sunset Development Co.	ctruebridge@bishopranch.com	925-866-0100
8	Mahvash Harms		Biggs Cardosa Associates	mharms@biggscardosa.com	415-986-1911 x1128
9	Carlos Vasquez		Biggs Cardosa Associates	cvasquez@biggscardosa.com	408-296-5515 x1148
N/A 10	Casey Hildreth		ALTA Planning	caseyhildreth@altaplanning.com	510-540-5008 x113
11	Rick Phillips		HNTB Corp	RPhillips@HNTB.com	510-208-4599
12	Gordon Sweet		BKF Engineers	GSweet@BKF.com	925-396-7736
13	Chris Weeks		Bishop Ranch Transportation	cweeks@bishopranch.com	925-830-0101
14	Josh Mello		ALTA Planning	joshmello@altaplanning.com	510-540-5008
15					
16					
17					
18					
19					
20					
21					
22					
23					

Prepared by: Biggs Cardosa Associates, Inc.
Date: 10/13/2014
2013148

MEETING RECORD OF MINUTES
FOR
SAN RAMON IRONHORSE
TRAIL OVERCROSSINGS

MEETING DATE: September 26, 2014 at 1:00 p.m.
LOCATION: San Ramon Permit Center
ATTENDEES: **See attached sign in sheet for names and organizations**

This meeting was the Third PDT (Project Development Team) Meeting to review past action items and discuss the Design Charette with all PDT members. The following issues and actions were noted:

ISSUES	NEXT ACTION
PDT Meeting #3:	
Review of PDT #2 Minutes and data Request Log: • Update on Community outreach on 10/28/14 City Council. • Cad files for City Hall were received by the Design Team **Project Status:** a) PDT update • PDA Grant was awarded to the City by Transportation Authority: $150k to initiate environmental review for two overcrossings • The TLC funding is being used for the current IHT overcrossings project b) City Center Project • Expect City Center approval by end of 2014 – also, Phase 2 site near IHT is "very conceptual" • BR3A site very schematic (not final) • Civic Center Plans are available for viewing by the public • RJA did the base sheets. Contact Lauren Barr, senior planner, City of San Ramon to obtain c) City Hall Project • Under construction and March 2016 completion is anticipated d) Carrie Ricci's update on rail easement. • If negotiations are successful then it is likely that the whole corridor will be available for this project. **Open Government on line survey posting on Oct 29th after Council Meeting on Oct 28th** • City will use "Open government" system for public outreach – will launch online survey (same as Charrette survey) after 10/28 Council Meeting. Staff will include bridge images from the design Charrette plus three more to get public input. City gave a brief on how the on-line preference survey works. • Separated into Crow Canyon & Bollinger sites	10/28/14 City Council BCA to get CADD files of the site On Line survey from 10/14 through 11/14

ISSUES	NEXT ACTION
• Each bridge needs a description 1 to 2 sentences. Josh Mello and Rick Phillips to give a brief description on each bridge and an overall description of the purpose.	BCA team to give input on bridge descriptions and overall description
• The City has 18 bridge options but will add 3 more (total of 21).	
• Lisa Bobadilla to work with Jim Townsend to put signs on the trail to direct the public to the survey with a QR code.	BCA team to confirm
• City Council: - Outreach results - 2 Design Charette results - Mahvash Harms or Josh will be present for support at the City Council (CC) meeting presentation on Oct 28th.	Josh or Mahvash to attend 10/28 council meeting
• CC IHT Advisory Committee presentation - Carrie Ricci says the committee wants to review the material beforehand. To be sent by Friday before CC meeting - The same package for City Council will be sent to committee. - The Committee will get the same presentation as the Council. Lisa to let Carrie know how long the presentation will be. BCA or Josh to attend at Advisory Meeting on 29th at 4:30 pm. Location is Brookview in Concord.	Josh or Mahvash to attend 10/29 CC advisory committee meeting
- BCA team to help City with the signage along the trail as well.	BCA to help on trail signage
Review of Charette Technical Memo Results	
• Josh gave a review of the two charettes and what was presented.	
• Bollinger Canyon, was viewed as the more "signature" location and public wanted something that related to the new City Hall.	
• Overall, the public liked clear - cable supported as opposed to a stone or wood look of a bridge.	
• Bollinger Bridge – contemporary / modern look preferred - No blocking of the view and hills - Monumental - Did not like "blocky" look	
• Crow Canyon – More of a functional design was preferred - Earth tone more popular; more natural setting - Arch style - Functional	
Discussion on the Preliminary Concepts and Costs	
• Rick presents some very preliminary concepts for bridge probable appearances, and also states that a look at plans/profiles should be accounted for to be able to begin bridge dimensions.	

ISSUES	NEXT ACTION
• Bridge #1 Bollinger, topics discussed: - Concepts used overlay of City Center and City Hall - Open structures adds to view of hills from BR3A - Connect two sides/architecture; modern buildings - use of <5% grade, long ramps - No ramps, use of stairs and elevators - Stairs (flat angled stair) - Single-span suspension, dual-span suspension, and tied arch concepts - Retaining walls: for transit, one side may need to be wall - ~20 ft headroom - Wall heights - Bike circulation - Space under the bridge - Points of interaction along trail - Vandalization, camera - Different space use in City Center and in between City Center / City Hall - Arch puts emphasis over road - Relationship to transmission towers? - Towers ~80-100 ft high; would need some coordination with PG&E once we transition from conceptual drawings to engineering drawings - Feedback: ▪ Lisa → Council likes an airy/open feeling and project area ▪ May triple cost due to length if a long bridge is used ▪ Brian→ View from Bollinger? ▪ Rick→ No clear sight lines on Bollinger ▪ Concern about costs of multiple spans/longer bridge which may be up to 3 times a shorter single span • Bridge #2 Crow Canyon, topics discussed: - Arch truss and (arch with cables) - Stairs from street - Two approach options (bridge on columns vs. fill/embankment) - Vertical elements framing sides - Long sightlines to bridge - Lisa → Prices? Both arches are the same - Chris → Keep number of joints minimal (noisy/bad for bikes)	

ISSUES	NEXT ACTION
• BR3A connection need to stay • BR3A - Connection will hold pedestrian only - Stairs, flat slope, and elevator - 2-way vehicular circulation path - Additional northerly pedestrian connection - Stair (trough) for bicycles - PG&E bank and well bank enclosure - Verify OH utility height and location - Signal will need to be dealt with	BCA to verify City to give direction on signal use
October 29th Advisory Committee Meeting attendees and needed material • Iron Horse Trail Advisory Committee on October 29, 4:30 p.m. at Brookview in Concord. Same presentation as Council.	Josh or Mahvash to attend
Funding Update • Support to renew Measure J: More bike/pedestrian o TLC opportunities o San Ramon rejoined Tri-Valley lobbying group • Ready for next round of ATP (November timeframe)	
Next Farmer's Market, Oct 13? • Go to several of these to promote website. • (Every week)	City/BCA team to go to Farmers Markets to promote website
Project Schedule - Milestones • Online Survey will be launched using "Open Government" system for public outreach after the 10/28 Council Meeting • Survey will close on 11/26/14 • Draft report on survey due 12/29/14	BCA team to prepare a report on survey due 12/29/14

SIGN IN SHEET **DATE:** _____

San Ramon Ironhorse Trail Overcrossings

	Name	Initials	Organization	Contact: Email and Number	
1	Lisa Bobadilla		City of San Ramon	lbobadilla@sanramon.ca.gov	925-973-2651
2	Theresa Peterson		City of San Ramon	tpeterson@sanramon.ca.gov	
3	Brian Bornstein		City of San Ramon	bbornstein@sanramon.ca.gov	
4	Jim Townsend		EB Regional Park District	Jtownsend@ebparks.org	510-544-2602
5	Carrie Ricci		cricc@pw.cccounty.us	Jtownsend@ebparks.org	925-313-2235
6	Brad Beck		bbeck@ccta.net	Jtownsend@ebparks.org	925-256-4726
7	Chris Truebridge		ctruebridge@bishopranch.com	NBernardi@bkf.com	925-866-0100
8	Mahvash Harms		Biggs Cardosa Associates	mharms@biggscardosa.com	415-986-1911 x1128
9	Carlos Vasquez		Biggs Cardosa Associates	cvasquez@biggscardosa.com	408-296-5515 x1148
~~10~~	~~Casey Hildreth~~		~~ALTA Planning~~	caseyhildreth@altaplanning.com	510-540-5008 x113
11	Rick Phillips		HNTB Corp	RPhillips@HNTB.com	510-208-4599
12	Gordon Sweet		BKF Engineers	GSweet@BKF.com	925-396-7736
13	Paul Krupka		CCTA (Krupka Consulting)	paul@pkrupkaconsulting.com	
14	Josh Mello		Alta Planning + Design	joshmello@altaplanning.com	6505042299
15	Gordon Sweet				
16	~~Brian Bornstein~~				
17	CHRIS WEEKS		Sunset Development	cweeks@bishopranch.com	4156990288
18					
19					
20					
21					
22					
23					

San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossings

Project Development Team (PDT) Meeting #3
Agenda

Date: September 26, 2014
Time: 1:00 PM
Location: San Ramon Permit Center
2401 Crow Canyon Road, San Ramon, CA 94583
** Need to check in at Reception Desk

Discussion Items:

1. Review of PDT#2 Minutes and Data Request Log
2. Project Status
   a) PDT update
   b) City Center Project
   c) City Hall Project
3. Open Government on line survey posting on Oct 29th after Council Meeting on Oct 28th
4. Review of Charrette Technical Memo Results
5. Discussion on the Preliminary Concepts and Costs
6. October 29th Iron Horse trail Advisory Committee Meeting attendees and needed material
7. Funding update
8. Next Farmers Market, Oct 13?
9. Project Schedule
10. Next meeting –PDT #4

Prepared by: Biggs Cardosa Associates, Inc.
Date: 2/11/2015
2013148

MEETING RECORD OF MINUTES
FOR
SAN RAMON IRONHORSE
TRAIL OVERCROSSINGS

MEETING DATE: February 6, 2015 at 10:00 a.m.
LOCATION: San Ramon Permit Center
ATTENDEES: **See attached sign in sheet for names and organizations**

This meeting was the Forth PDT (Project Development Team) Meeting to review past action items and discuss the Design Charrette process, community feedback, survey results and City Council comments with all PDT members. The following issues and actions were noted:

ISSUES	NEXT ACTION
PDT Meeting #4:	
1. Review of PDT #3 Minutes and data Request Log: • No comments. **2. Project Status & PDT update:** b) City Center Project • City Center construction drawings in progress and will be submitted to the City by the end of the year. Demolition of existing structure in late summer 2015. Break ground in Spring of 2016 and opening by October 2017 • Retail will be built before overcrossing • Phase 2 site near IHT is "very conceptual" • BR3A site very schematic • Initiation of Phase 2 at least 5 years away – likely longer. • City Center Plans are available for viewing by the public c) City Hall Project • Under construction, March 2016 completion is anticipated d) Carrie Ricci's update on rail easement. • Discussions are still underway and if successful then it is likely that the whole corridor will be designated as a non-rail corridor. **3. Review of Design Charrette Process & Community Feedback Technical Memo Results** • City used "Open Government" system for public outreach, survey available 10/31-12/31. Council Meeting and finished on December 31st 2014. Survey included 21 bridge images. • Survey was separated into Crow Canyon & Bollinger sites • City received 112 responses for both bridges, on Bollinger 78 responded and left email addresses, on Crow Canyon 70 responded and 40 left email addresses. • The top three choices were Arch, Cable Stayed and Prefabricated/ simple bridges.	

ISSUES	NEXT ACTION
PDT Meeting #4:	
• Bollinger Canyon, was viewed as a "signature/ iconic" location and public wanted something that related to the new City Hall. • Overall, the public liked clear - cable supported as opposed to a stone or wood look of a bridge. • Bollinger Bridge – contemporary / modern look preferred - No blocking of the view and hills - Monumental - Did not like "blocky" look • Crow Canyon – More of a functional design was preferred - Arch style and Functional • Online survey will remain open until 04/07/15. **4. Review of the City Council meeting on 10/28/14 and 1/27/15 (San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project Status Update), Council's comments on Bollinger and Crow Canyon Overcrossings & Next 3 months activities** • City has made presentations to the Council on two different dates and to numerous other stakeholders such as City Planning Commission and CC IHT Advisory Committee and has received similar comments. They like an iconic structure at Bollinger. • Ask Council to rank Top 3 concepts on April 21st Council meeting • During May and June design team will develop 3 concept level designs for the top three structure types and the approximate cost estimate. Team to use the layout of the original concept plan shown in 2009 reports until total available width of the corridor at the bridges is determined. • June Council meeting: Council selects preferred alternatives and NEPA & CEQA process starts on both sites. • Need Ok from County and Park District. County would appreciate being kept in the loop on design. Park District will accept concept to be chosen by the Council but will have input on the design details. • Removal of light rail restriction may be happening "soon". • County will own the trail. • Who will maintain the bridges? City to determine. Decision will influence design standards. Better to front-load expenses as capital, so ongoing maintenance is less. • Currently Trail is open 5 a.m. to 10 p.m., in future it may be open 24 hours/day • There are no plans to add lighting (because of cost & environmental) on the trail. However, understood that bridges will have lighting.	City to determine who will maintain the bridges.

ISSUES	NEXT ACTION
PDT Meeting #4:	
• Treat Boulevard bridge has lighting • Possible minimum width requirements: A. Caltrans Class I requires width >8' B. Parks district 14' (10' travel with 2' shoulders) C. Treat Blvd bridge is 15' D. Needs to accommodate pick-up truck E. Fire department may want to drive small truck over F. Design team to use 20' wide bridges for the concepts at Bollinger, 15' wide for Crow Canyon concepts.	use 20' wide bridge for the concepts at Bollinger and 15' at Crow Canyon
5. Discussion on the Preliminary Concept on Bollinger Bridge; South Tower: • General consensus among PDT members in support of this approach. • A Tower on north side of the road distracts from City Center, too much on ground. A tower on south side will be in view shed from roadway approaches and visible from freeway. Following are variation that can be considered: o One tower type o Two towers, one each side o Three towers, two on the north side o Can also be one tower on south side w/ rest of span supported by columns (transparent) o Cable stayed bridges can accommodate curved deck. • **Arch** – Will have more steel surfaces/paint, less expensive to build • Open at ground level between City Center and City Hall • Verify OH utility height and location • Concepts to include 3 views and one plan	
6. Funding Update and Related Items • PDA Grant (Federal $) was awarded to the City by Transportation Authority: $150k to initiate environmental review for two overcrossings. CEQA and NEPA process can start. • The TLC funding is being used for the current IHT overcrossings project • City plans to get these two projects to be shovel ready/ for construction late in 2016 or early 2017 • City is talking with Dublin/ Pleasanton to apply for TIGER Grants • City will support to renew Measure J (might be on ballot in 2016): More bike/pedestrian o TLC opportunities, apply this May to qualify o San Ramon rejoined Tri-Valley lobbying group	

ISSUES	NEXT ACTION
PDT Meeting #4:	
• Ready for next round of ATP in 2016 • Consider applying for OBAG **7. Project Schedule - Milestones** • Mahvash to modify the schedule per the comments received from City **8. Next meeting –** • PDT #5- June 12th 2015 at 10 AM • Council meeting presentation on June 23rd	BCA to update schedule

San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossings

Project Development Team (PDT) Meeting #5
Agenda

Date: June 26, 2015
Time: 1:30 PM
Location: San Ramon Permit Center
2401 Crow Canyon Road, San Ramon, CA 94583
** Need to check in at Reception Desk

Discussion Items:

1. Review of PDT# 4 Minutes and Data Request Log

2. Project Status
   a) PDT update
   b) City Center Project
   c) City Hall Project

3. Funding update

4. Discussion on the Preliminary Concepts

5. Project Schedule

6. Next meeting – PDT #6

San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossings

Project Development Team (PDT) Meeting #4
Agenda

Date: February 6, 2015
Time: 10:00 AM
Location: San Ramon Permit Center
2401 Crow Canyon Road, San Ramon, CA 94583
** Need to check in at Reception Desk

Discussion Items:

1. Review of PDT#3 Minutes and Data Request Log

2. Project Status
   a) PDT update
   b) City Center Project
   c) City Hall Project

3. Review of Design Charrette Process & Community Feedback Technical Memo Results

4. Review of the City Council meeting on 10/28/14 and 1/27/15(San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project Status Update), Council's comments on Bollinger and Crow Canyon Overcrossings:

5. Discussion on the Preliminary Concepts

6. Funding update

7. Project Schedule

8. Next meeting –PDT #5

SIGN IN SHEET **DATE: 2/6/15**

San Ramon Ironhorse Trail Overcrossings PDT # 4

	Name	Initials	Organization	Contact: Email and Number	
1	Lisa Bobadilla	X	City of San Ramon	lbobadilla@sanramon.ca.gov	925-973-2651
2	Theresa Peterson	X	City of San Ramon	tpeterson@sanramon.ca.gov	925-973-2685
3	Brian Bornstein		City of San Ramon	bbornstein@sanramon.ca.gov	925-973-2686
4	Jim Townsend	X	EB Regional Park District	Jtownsend@ebparks.org	510-544-2602
5	Carrie Ricci	X	Contra Costa County	cricc@pw.cccounty.us	925-313-2235
6	Brad Beck		CCTA	bbeck@ccta.net	925-256-4726
7	Chris Truebridge	X	Sunset Development Co.	ctruebridge@bishopranch.com	925-866-0100
8	Mahvash Harms	X	Biggs Cardosa Associates	mharms@biggscardosa.com	415-986-1911 x1128
9	Carlos Vasquez		Biggs Cardosa Associates	cvasquez@biggscardosa.com	408-296-5515 x1148
10	Rick Phillips	X	HNTB Corp	RPhillips@HNTB.com	510-208-4599
11	Gordon Sweet	X	BKF Engineers	GSweet@BKF.com	925-396-7736
12	Chris Weeks	X	Bishop Ranch Transportation	cweeks@bishopranch.com	415-699-0298
13	Josh Mello	X	ALTA Planning	joshmello@altaplanning.com	510-540-5008
14	Paul Krupka	X	CCTA (Krumpka Consulting)	paul@pkrupkaconsulting.com	

Prepared by: Biggs Cardosa Associates, Inc.
Date: 7/6/2015
2013148

MEETING RECORD OF MINUTES
FOR
SAN RAMON IRONHORSE
TRAIL OVERCROSSINGS

MEETING DATE: June 26, 2015 at 1:30 p.m.
LOCATION: San Ramon Permit Center
ATTENDEES: **See attached sign in sheet for names and organizations**

This meeting was the fifth PDT (Project Development Team) Meeting to review past action items and discuss the various design concepts with all PDT members. The following issues and actions were noted:

ISSUES	NEXT ACTION
PDT Meeting #5:	
1. Review of PDT #4 Minutes and action items: • No comments. **2. Project Status & PDT update:** b) City Center Project • Demolition of existing structure in August 2015. d) Carrie Ricci was not present to give an update on rail easement. • But we understand that the discussions are still underway and if successful then it is likely that the whole corridor will be designated as a non-rail corridor. **3. Discussion on the Preliminary Concept on 20' wide Bollinger Bridge:** Rick Philips and Mahvash presented draft renderings of 2 different cable stayed bridge options, one with a tower on the south side of Bollinger and another with a tower on the north side of Bollinger (both with single tower and "A-frame" tower variations), and also a tied arch bridge option. General consensus among PDT members was in support of the tower on the south side. A Tower on north side of the road will distract from City Center structure and will have too much on ground. A tower on south side is preferred and will be in view shed from roadway approaches and visible from freeway. Use 20' wide bridge for the Bollinger and 15' at Crow Canyon. Chris Truebridge comments: - More interested in capital and maintenance costs. - No preference; all options look fine. - Refinement with visual simulation will help. - City Center Bldg. will be 8 stories (86-feet tall).	City to contact the County to find out status

ISSUES	NEXT ACTION
PDT Meeting #5:	
Chris Weeks comments: - Concerned with physical obstruction with single mast tower if it is located in the middle of the path. - "A" frame shape would eliminate that conflict. - If bicycle and pedestrian traffic is separated on either side of tower, Chris has concerns that it may get confusing. - Avoid style/type that is similar to New Bay Bridge - Regarding viaduct vs. fill: Open area would be desirable, but need to consider vertical clearance. Close off with embankment or MSE Wall where you could bump your head. - Use Landscaping opportunities. • **Arch** – also looks good. Look at variation of the double arches. • Use open structure at ground level between City Center and City Hall. • Check whether we can do up-lighting on the bridges. • City will determine who will maintain the bridges. **4. Discussion on the Preliminary Concept on 15' wide Crow Canyon Bridge:** Rick Phillips and Mahvash Harms presented draft renderings of the tied-arch Crow Canyon Bridge. Consensus among PDT members was that option was acceptable and that no variations on this option were required for Council presentation. **5. Funding Update and Related Items:** • For the November 2016 expenditure plan approval: - July 30th 2015 is deadline for cities to submit the project list to TA. - Final list approval is in Jan/Feb 2016. • PDA Grant (Federal $) was awarded to the City by Transportation Authority: $150k was to initiate environmental review for the two overcrossings. Environmental firm is on board and Paul Krupka is the overseeing it. **6. Next meeting:** • July 14th - 5 p.m. - site visit, mark (Paint) locations of structure, landscape, viaduct, etc. • July 14th - 7 p.m. City Council Meeting - Presentation - Council Agenda - Resolution	City to determine City's up-lighting requirements and who will maintain the bridges.

SIGN IN SHEET **DATE: June 26th, 2015**

San Ramon Ironhorse Trail Overcrossings

PDT # 5

	Name	Initials	Organization	Contact: Email and Number	
1	Lisa Bobadilla	X	City of San Ramon	lbobadilla@sanramon.ca.gov	925-973-2651
2	Theresa Peterson	X	City of San Ramon	tpeterson@sanramon.ca.gov	925-973-2685
3	Brian Bornstein	X	City of San Ramon	bbornstein@sanramon.ca.gov	925-973-2686
4	Jim Townsend		EB Regional Park District	Jtownsend@ebparks.org	510-544-2602
5	Carrie Ricci		Contra Costa County	cricc@pw.cccounty.us	925-313-2235
6	Brad Beck		CCTA	bbeck@ccta.net	925-256-4726
7	Chris Truebridge	X	Sunset Development Co.	ctruebridge@bishopranch.com	925-866-0100
8	Mahvash Harms	X	Biggs Cardosa Associates	mharms@biggscardosa.com	415-986-1911 x1128
9	Carlos Vasquez		Biggs Cardosa Associates	cvasquez@biggscardosa.com	408-296-5515 x1148
10	Rick Phillips	X	HNTB Corp	RPhillips@HNTB.com	510-208-4599
11	Gordon Sweet	X	BKF Engineers	GSweet@BKF.com	925-396-7736
12	Chris Weeks	X	Bishop Ranch Transportation	cweeks@bishopranch.com	415-699-0298
13	Josh Mello		ALTA Planning	joshmello@altaplanning.com	510-540-5008
14	Paul Krupka	X	CCTA (Krumpka Consulting)	paul@pkrupkaconsulting.com	650-504-2294

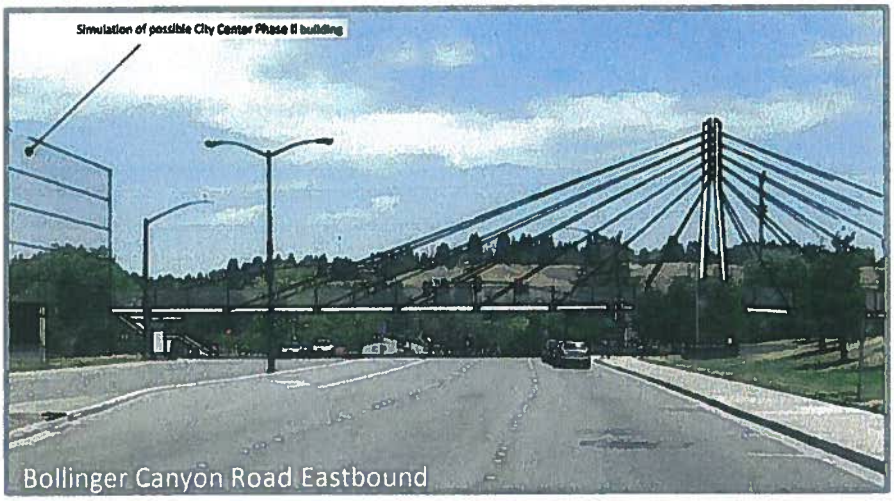
Technical Memo
Design Charrette Process and Community Feedback

Technical Memo

Design Charette Process & Community Feedback

Iron Horse Regional Trail Overcrossings at Bollinger Canyon Road and Crow Canyon Road

San Ramon, CA
July 2015



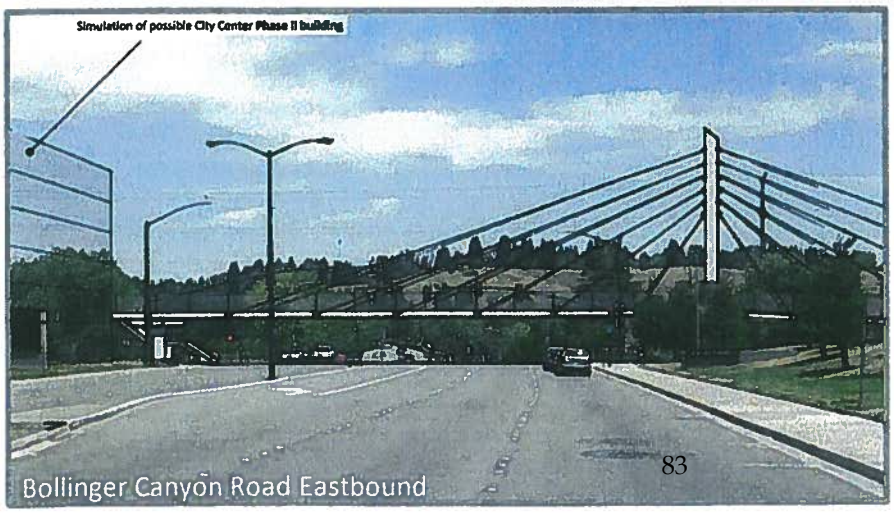


Table of Contents

1 Project Overview

The City of San Ramon is currently studying two proposed bicycle and pedestrian overcrossings along the Iron Horse Regional Trail, at Bollinger Canyon Road and Crow Canyon Road. A feasibility study conducted in 2009 identified these two overcrossings as important connections to improve accessibility, safety, and traffic operations.

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the connectivity at the Bollinger Canyon Road and Crow Canyon Road crossings.

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase. At Crow Canyon Road, the Iron Horse Regional Trail crossing does not align with a cross street, and instead has a dedicated signalized crossing for trail users.

In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the two overcrossings, whether to maintain the at-grade crossing facilities, and the design aesthetic for each location.

2 Design Charrette Process

A design charrette is a collaborative planning effort that harnesses the talents and energies of all interested parties to create and support a feasible plan that represents transformative community change. On May 20 and June 9, 2014, the consultant team, led by Biggs Cardosa Associates, Inc., held two public design charrettes to gather input on alignment and design of the proposed Iron Horse Regional Trail overcrossings at Bollinger Canyon Road and Crow Canyon Road.

The two design charrettes, facilitated by Alta Planning + Design, were two-hours in length and held on weekday evenings at the San Ramon Community Center. A total of 23 people attended the sessions, including residents of San Ramon and neighboring communities along the trail.

Participants first viewed a virtual site tour that reviewed the location of each crossing, surrounding land uses and points of interest, and potential alignments for each overcrossing identified in the 2009 feasibility study. After this overview and a virtual site tour, participants were guided through a series of exercises to capture the challenges, opportunities, and community needs for the crossing alignments and designs. The presentation used is included in Appendix A.

This memo describes each of these exercises and highlights the key findings of the design charrettes.

3 Brainstorming & Mapmaking

A brainstorming session captured charrette participants' initial reactions to the virtual site tour, as well as general thoughts on how the two overcrossings will fit within the community. Following this, participants were invited to draw potential overcrossing configurations and other details on large maps of each site. These comments and concerns are discussed for each crossing below, and the marked-up maps can be seen in Appendix B.

Charrette participants brainstorm ideas for the overcrossing at Bollinger Canyon Road

3.1 General Comments

Community members expressed some comments applicable to the entire study process, including:

- Support for both overcrossings, although Bollinger Canyon Road was identified as a priority over Crow Canyon Road;
- Overcrossings will benefit motorists and pedestrians traveling along the roadways in addition to trail users, by minimizing signal delays;

They also made several general suggestions to be considered for both overcrossings as the planning process advances. These ideas include:

- Preserving the character of the Iron Horse Regional Trail;
- Using surface treatments that accommodate the various users of the trail, including cyclists, joggers, and those using mobility devices;
- Providing places to gather;
- Considering the spaces underneath the overcrossings, and activating these spaces into inviting community gathering places like skate parks or farmer's markets.

Participants marking ideas for potential overcrossing alignments at Crow Canyon Road

3.2 Bollinger Canyon Road Summary Comments

The trail crossing at Bollinger Canyon Road provides an opportunity to tie the Iron Horse Regional Trail to planned developments on adjacent parcels, including a vibrant city center and new city hall.

Charrette participants noted a number of existing conditions about this location that they feel will be important for the City to consider as they move forward with designs. These include:

- This section of trail is heavily used by children on their way to school or the nearby skate park;
- Traffic here is unpredictable;
- The current trail crossing creates delays for both trail users and motorists;
- Occasional gridlock occurs on Bollinger Canyon Road; and
- There is a desire to separate pedestrians, bicyclists and motorists.

Suggestions for the alignment and configuration of the crossing include:

- Maintain the at-grade crossing to facilitate bicycle and pedestrian access to new destinations;
- Improve the crossing to increase visibility for motorists and prevent conflicts;
- Consider providing access to the trail at locations other than Bollinger Canyon Road—for example, link the upper level of the new city hall to the overcrossing with an elevated walkway;
- Installing a sidewalk/sidepath along Bollinger Canyon Road from San Ramon Boulevard to the Iron Horse Regional Trail;
- Widening the sidewalk along the north side of Bollinger Canyon Road;

- Incorporate clear glass blocks into the overcrossing to allow light to pass through;
- Add stairs or other vertical access to the overcrossing at the sidewalk along Bollinger Canyon Road on either side;
- Include changeable message board for information about community events or festivals;
- Protect views of the hills;
- Consider adding green space at the top; and
- Incorporate real-time feedback on calories burned or number of users.

3.3 Crow Canyon Road Summary Comments

At Crow Canyon Road, the trail character is more natural feeling, and surrounded by lower-density uses that generate less bicycle and pedestrian traffic.

Charrette participant observations on the existing conditions at Crow Canyon Road include:

- The most common use of the trail in this location is as a thoroughfare for commuter cyclists on longer rides—although this may change with the added destinations at Bollinger Canyon Road;
- Motion-controlled lights at the conference center parking lot are sensitive to wildlife in the area, keeping the trail dark unless someone passes by;
- Both trail users and motorists currently experience long delays at this location; and
- There is a desire to separate pedestrians, bicyclists and motorists.

Ideas generated by charrette participants for what they would like to see included in the future crossing include:

- Careful consideration of wildlife;
- Preserve the rustic character of this portion of the trail;
- Add trees or greenery to shield unsightly adjacent uses from the trail, potentially by transplanting redwoods from a nearby grove that needs to be thinned;
- Eliminate the at-grade crossing to improve traffic flow, reduce pollution from idling vehicles, and discourage bicyclists and pedestrians from crossing at this location;
- Maintain at-grade access to sidewalks and provide stairs, elevators, or corkscrew ramps to access the overcrossing;
- Incorporating branding for San Ramon into the overcrossing;
- Landscaping the existing median more fully;
- Acknowledging/preserving trail artifacts and corridor history; and
- Crossings should have high fences/railings to prevent debris from being thrown into the road below.

4 Visual Preference Survey

The closing exercise for the design charrettes was a visual preference survey to collect input on the aesthetic preferences for the two proposed overcrossings. Participants were shown images of 18 different overcrossings and asked to rate each one on how well the design, materials, and color fit Bollinger Canyon Road and Crow Canyon Road. They rated each of these characteristics on a five-point scale, where a score of one indicated strong dislike and a score of five indicated a desirable quality. These scores were averaged across all surveys collected, and then added to give each bridge a total score out of 15. Participants were also invited to comment on any of the bridges to clarify the features they felt strongly fit or clashed with the San Ramon community. A sample of the survey form is included in Appendix C.

The exercise was also made available as an online survey that added three additional overcrossing examples. This survey is included in Appendix D.

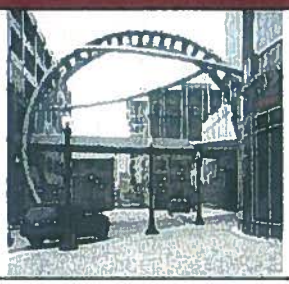
Charrette participants fill out Visual Preference Surveys to provide input on design, materials, and color of the proposed overcrossings

4.1 Design Charrette Visual Preference Survey

4.1.1 Bollinger Canyon Road Visual Preference Results

High Scores

The following three bridges had the highest overall scores for the Bollinger Canyon Road overcrossing out of 15 possible points.

Highest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Score	11.8	9.8	9.6
Comments	• Ties in best with city center • Lower arches • Matches design of new San Ramon City Hall • Perhaps too simple, but like cable/tower • Reminiscent of new Bay Bridge	• Practical • Spacious • Needs to be less "meshy" looking • Nice steel, shows the sky • Neat modern design	• Maybe from new San Ramon City Hall to the trail • Modern, glass, suspension • Nice complement to new city center • I like the glass • Unique, open, neutral color • Like the openness

The same three bridges also claimed the two highest-scoring spots across all three individual categories of design, materials, and color.

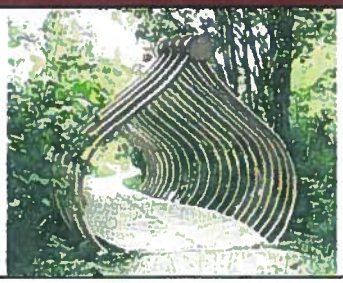
Participants were attracted to the sleek lines and open designs of these overcrossings, which they feel would tie in well to the planned developments at Bollinger Canyon Road. In their comments, participants expressed a desire for an overcrossing that is modern without being futuristic.

Charrette participants responded positively to bridges using transparent or translucent materials like glass or chain link fence to create safe enclosures while preserving their airiness. A strong visual connection to the new city center and San Ramon City Hall is important, as well.

Other characteristics that were mentioned include blue elements to tie in with the City of San Ramon brand colors, landscaping, and providing elevator access.

Low Scores

The following three bridges had the lowest overall scores for Bollinger Canyon Road out of 15 points, as well as the bottom two scores across each of the three categories.

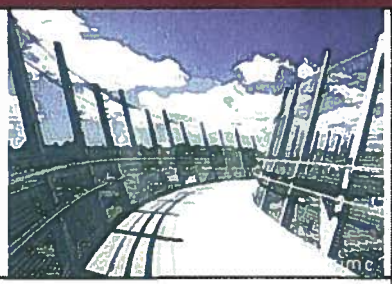
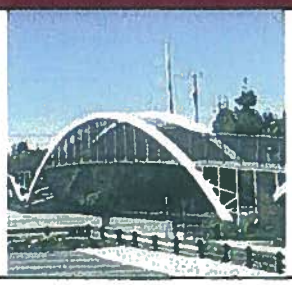
Lowest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Score	5.0	5.7	5.8
Comments	• Too urban • Too much dead space underneath • Too utilitarian for this location	• Smooth out angles • Belongs in an elementary school • Too sharp • Too artsy	• Too enclosed • Interesting, but not for this purpose • "Gather ye hobbits!" • Too artsy

Participants generally disliked designs that were too artsy or too utilitarian, implying a preference for an overcrossing design that has some level of aesthetic appeal without being overly complicated. Bridges that looked old-fashioned, heavy, or industrial were not rated highly, and wooden decking was rejected as too difficult to maintain. Simplistic designs, bland designs, and those that appeared closed-off received similarly low scores.

4.1.2 Crow Canyon Road Visual Preference Results

High Scores

For the Crow Canyon Road overcrossing, participants provided fewer written comments to clarify their desires. The following three bridges were scored highest overall, out of a possible 15 points.

Highest Scoring Bridges: Crow Canyon Road			
Bridge			
Score	9.5	9.5	9.0
Comments	• Safe for street crossing		• Crow is more rustic; iron • Add blue – San Ramon colors

They also received the highest scores for material and colors, while the following bridge claimed the highest average score for design, out of a possible five points.

Highest Scoring Design: Crow Canyon Road	
Bridge	
Score	3.2
Comments	• Add wood

Participants tended to award higher scores to bridges that had a more rustic or traditional design than those they selected for Bollinger Canyon Road. Bridges with curving arches, clean lines, and few frills were ranked among the most preferred designs. Neutral colors including browns, darker colored metals, and earth tones were scored highly, while white was not.

Participants still scored wooden decking unfavorably, but expressed a desire to see more wood elements incorporated into the design of the railings or enclosure of an overcrossing for Crow Canyon Road. One participant suggested incorporated some kind of soft surface for runners, such as decomposed granite.

Low Scores

The following bridges received the lowest overall scores for Crow Canyon Road out of 15 possible points, as well as the lowest scores across each individual category.

Lowest Scoring Bridges: Crow Canyon Road			
Bridge			
Score	5.8	5.3	5.5
Comments	• Wrong era • Too ornate • Too 'time period' for a place without history	• Too modern	

Once again, overly complex designs were scored poorly by charrette participants. Other undesirable characteristics for the Crow Canyon Road overcrossing include white or blue elements, modern designs, and bridges with stonework or that appear chunky and heavy. Cost was also mentioned, with participants suggesting a more inexpensive design at this location to devote more funding to a larger gateway overcrossing at Bollinger Canyon Road.

4.2 Online Visual Preference Survey

Following the two design charrettes, the Visual Preference Survey was made available online to gather additional feedback from community members on preferred design elements for the overcrossings. Two separate surveys were created, with nearly identical content: one for Bollinger Canyon Road, and one for Crow Canyon Road. Three additional bridge examples were included in the online version of the exercise, for a total of 21 bridges.

The survey was available from October 30, 2014 through April 7, 2015. During this period, 1,112 people viewed the survey and 181 respondents provided input on the Bollinger Canyon Road overcrossing. For the Crow Canyon Road overcrossing, 564 people viewed the survey and 91 respondents provided input. It is unknown how many participants provided input on both locations.

The same rating system was used for the online survey that participants at the design charrettes used. Respondents rated the color, material, and architecture of each sample bridge on a five-point scale, where a score of one indicated strong dislike and a score of five indicated a strong preference for that quality. Respondents were invited to provide separate scores for each overcrossing location. These scores were averaged across all responses received, and added to give each bridge a total score out of 15 possible points. Space was provided at the end of the survey for respondents to offer additional comments. A copy of the survey form is provided in Appendix D.

Respondent Demographics

Of the 181 respondents who provided feedback on the Bollinger Canyon Road overcrossing, 86 declined to share their age. Nine respondents are between 70 and 79 years old, twelve respondents are between 60 and 69, and 25 respondents are between 50 and 59 years old. The largest age group was 40 to 49 years old, with 33 responses. Twelve people age 30 to 39 responded, three people between 20 and 29, and one person under 20. Forty-eight males responded, along with 55 females and 78 respondents who declined to share their gender. Figure 4-1 shows the geographical distribution of respondents based on elementary school districts within the city.

For the Crow Canyon Road overcrossing survey, 53 of the 91 respondents provided their age. Seven respondents each were between 70 and 79 years old, and between 60 and 69 years old. Fifteen respondents were between 50 and 59 years old, the largest age group of respondents. Twelve respondents were between 40 and 49 years old. Eight respondents were 30 to 39 years old, three respondents were between 20 and 29, and one respondent each fell into under 20 age category. Thirty-one males and 26 females responded to this survey, and 34 respondents declined to provide their gender. Figure 4-2 shows the geographic distribution of respondents, based on elementary school zones in San Ramon.

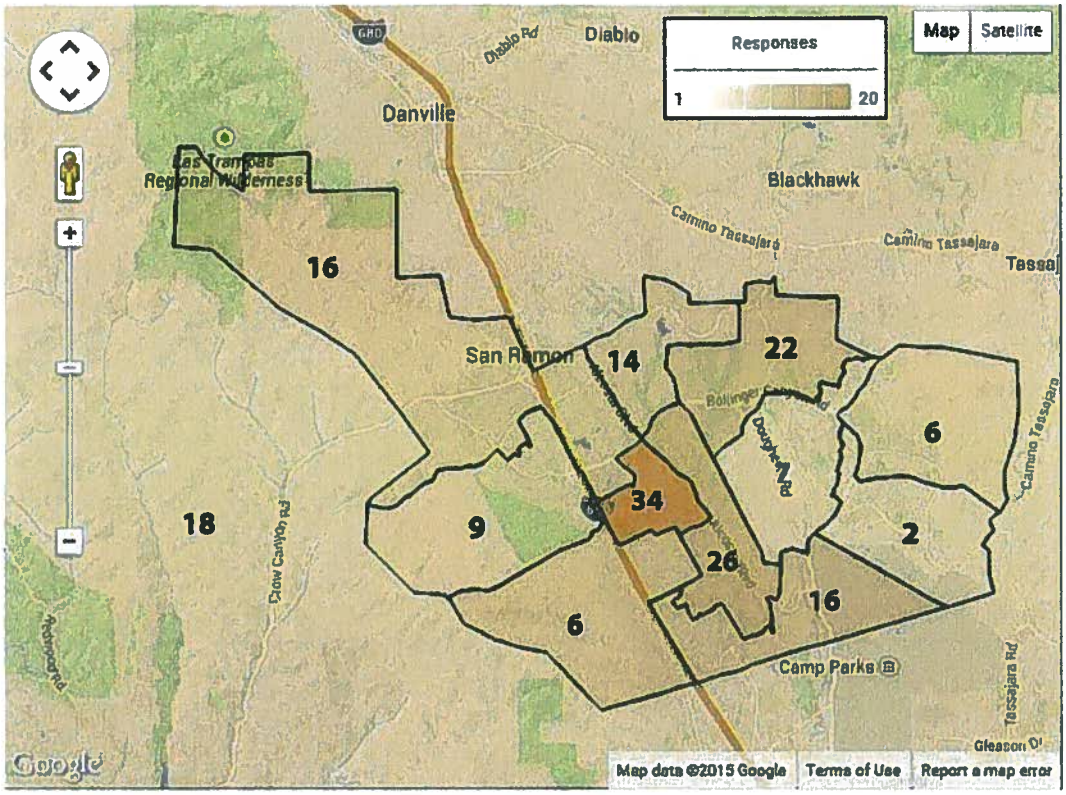


Figure 4-1: Bollinger Canyon Road Respondent Geographic Distribution

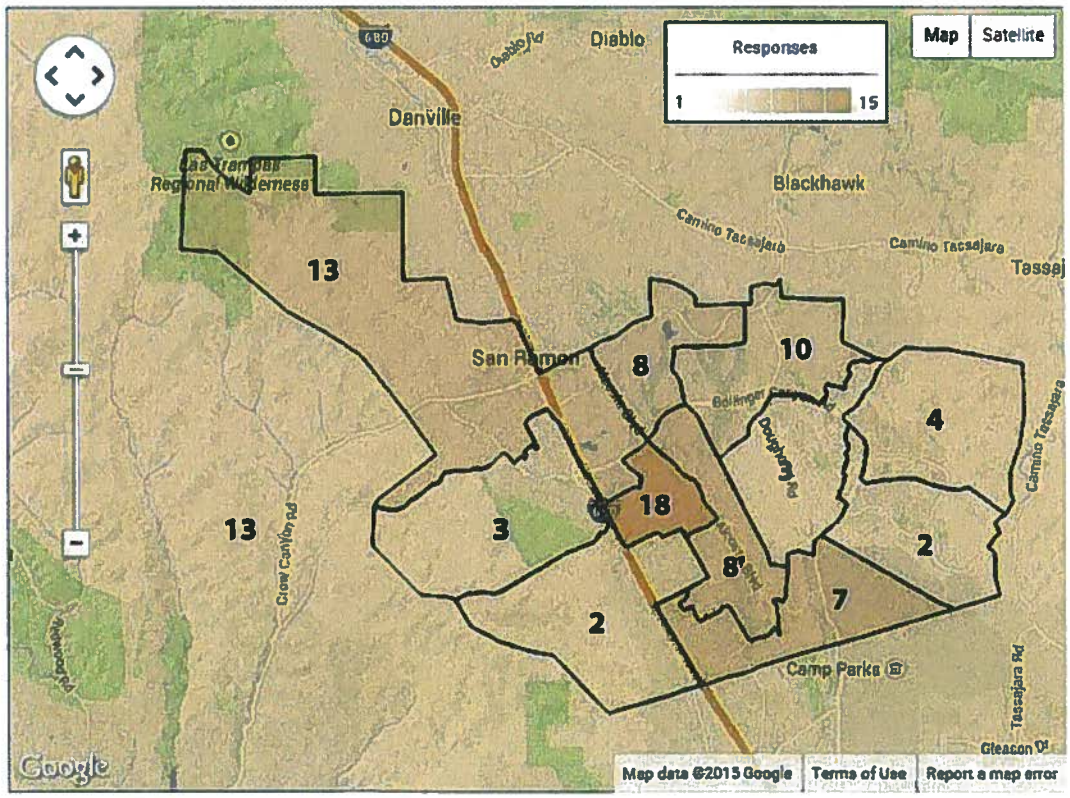


Figure 4-2: Crow Canyon Road Respondent Geographic Distribution

Key Comment Themes

Some respondents offered comments that refer globally to the planning process or the two overcrossings as a pair. Key themes in these comments include:

- Overcrossings will improve **safety and traffic flow**, and reduce wait times for motorists, bicyclists, and pedestrians
- **Safety and cost** should be key considerations when choosing a final design, including maintenance costs
- Care should be taken to make the surface **smooth for bicyclists**, roller bladers, and other wheeled users
- Consider adding **wayfinding** to destinations
- Designs should prevent things from being **dropped or thrown** off the sides of the overcrossings
- Consider **continuity** with other Iron Horse Regional Trail overcrossings, including at Ygnacio Valley Road in Walnut Creek and at Treat Boulevard in Pleasant Hill
- Choose **lighting** that minimizes light pollution
- Provide **shade** where feasible
- Bollinger Canyon Road is a **higher priority** for an overcrossing than Crow Canyon Road
- Preserve characteristic **'flatness'** of the Iron Horse Trail by avoiding steep grade changes

4.2.1 Bollinger Canyon Road Online Survey Results

High Scores

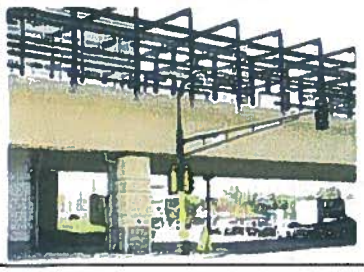
The following three bridges had the highest overall scores for the Bollinger Canyon Road overcrossing out of 15 possible points.

Highest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Score	10.4	10.1	9.7

Based on these scores, participants appear to prefer bridge concepts with concrete decks and steel railings, in simple geometric arch shapes.

Low Scores

The following three bridges had the lowest overall scores for the Bollinger Canyon Road Overcrossing, out of 15 total possible points.

Lowest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Score	6.0	5.5	5.0

Comments

Additional comments on the Bollinger Canyon Road overcrossing include the following themes:

- Overcrossing should complement the new city center
- Simple, modern, clean, not gaudy or over-ornamented
- Maintain or enhance access from the trail to adjacent shopping centers and civic buildings
- Earth tones or other elements to blend the modern city center development with the natural feel of the trail
- Preserve open views to surrounding hills
- Open look and feel are preferred, light
- Consider marquee or other way to share information about community events

4.2.2 Crow Canyon Road Online Survey Results

High Scores

The following three bridges had the highest overall scores for the Crow Canyon Road overcrossing out of 15 possible points.

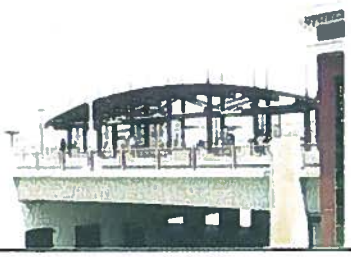
Highest Scoring Bridges: Crow Canyon Road

Bridge			
Score	10.5	9.8	9.5

Based on these scores, participants appear to prefer similar designs to those selected for Bollinger Canyon Road, although they indicated a preference for more natural elements including stone.

Low Scores

The following three bridges had the lowest overall scores for the Crow Canyon Road overcrossing out of 15 possible points.

Lowest Scoring Bridges: Crow Canyon Road			
Bridge			
Score	5.8	5.6	5.1

Comments

Additional comments on the Crow Canyon Road overcrossing include the following themes:

- Minimal treatments needed here
- Simple, safe overcrossing
- Warm stone and other natural textures are preferred over modern metallic designs
- Maintain open feeling, views

4.3 Voting at Community Events

Input on bridge designs was also collected at a number of community events in March and April, 2015. Events and locations where the boards were displayed included:

- Chamber of Commerce Business Expo on March 19
- Government 101 Community Development Presentation on March 23
- Community Center from March 24 to March 27
- City Hall from March 30 to April 1
- Dougherty Station Community Center from April 1 to April 2
- Permit Center from April 3 to April 6
- Senior Center from April 6 to April 7

A total of 71 votes for Bollinger Canyon Road and 48 votes for Crow Canyon Road were received. Unlike the visual preference survey, respondents were not asked to vote on individual characteristics of the example bridges. Instead, they were simply asked to indicate which bridges they found most appealing for each location.

4.3.1 Bollinger Canyon Road Voting Results

Most Votes: Bollinger Canyon Road			
Bridge			
Votes	9	11	14

4.3.2 Crow Canyon Road Voting Results

Most Votes: Crow Canyon Road			
Bridge			
Votes	5	5	8

4.4 Overall Favored Designs from Charrettes and Online Survey

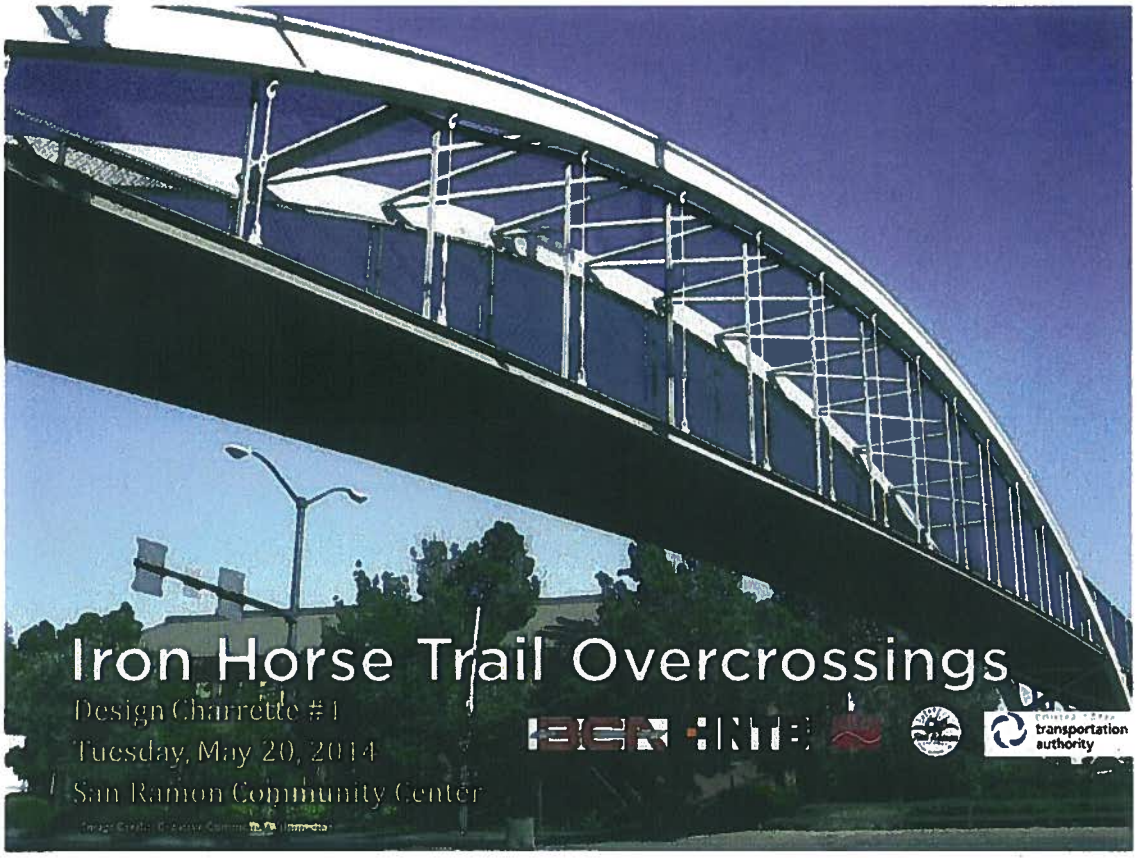
In order to determine which design elements were favored across all feedback received, the total scores from the design charrette process and the online survey were averaged for each bridge. Four bridges emerged as high scoring for both locations. Two of these three bridges were also in the top three for both locations in the voting input, and a third was in the top three for Crow Canyon Road. Because of the small number of responses received in voting compared to the visual preference survey, input received both in person and online for the visual preference survey was weighted more heavily when identifying the top three bridges.

Highest Scoring Bridges: Overall		
Bridge		
Score	Bollinger Canyon Road: 9.4 Crow Canyon Road: 9.7 Top 3 in voting: Both locations	Bollinger Canyon Road: 11.1 Crow Canyon Road: 9.2
Bridge		
Score	Bollinger Canyon Road: 9.0 Crow Canyon Road: 9.0 Top 3 in voting: Both locations	Bollinger Canyon Road: 9.1 Crow Canyon Road: 8.8 Top 3 in voting: Crow Canyon Road

5 Next Steps

The results of the design charrettes, online survey, and input from stakeholders will be used by the City of San Ramon and the consultant team to develop initial design concepts for the two overcrossings along the Iron Horse Regional Trail. Additional opportunities for public and stakeholder input are incorporated into this phase of the project and sufficient advance notice will be provided.

Appendix A: Design Charrette Presentation



The San Ramon Valley Iron Horse Trail Pedestrian Overcrossing Project is separated into three Phases

Phase I – the Corridor Concept Plan – has been completed, and included the City of San Ramon, East Regional Park District, Contra Costa County, Town of Danville, and Contra Costa Transportation Authority.

Phase I evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclists and pedestrians. The Plan evaluated bridge concepts, feasibility, and potential costs. Completed in 2009.

Phase II – is a collaborative effort between San Ramon, Contra Costa County, and the East Bay Regional Park, which owns and maintains the trail.

Phase II will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for next phase and construction.

Phase III – final design, environmental approval, and construction of the overcrossing.

Iron Horse Trail Overcrossings Design Charrette BCA HNTB alta transportation authority

Before we embarked on Phase II:

We developed and circulated a Request for Proposals – Community Engagement/Outreach and Preliminary Design.

- Held Bidders Conference – January 15, 2013
- Received proposals – 7 firms – February 1, 2013
- Held Oral Board – March 6, 2013 – Interviewed 5 firms
- Selected Biggs Cardosa Associates (BCA)

Iron Horse Trail Overcrossings Design Charrette BCA HNTB alta transportation authority

Introduction

What is a Charrette?

A charrette is a collaborative planning event that harnesses the talents and energies of all affected parties to create and support a feasible plan that represents transformative community change.

-The National Charrette Institute

Design Charrette

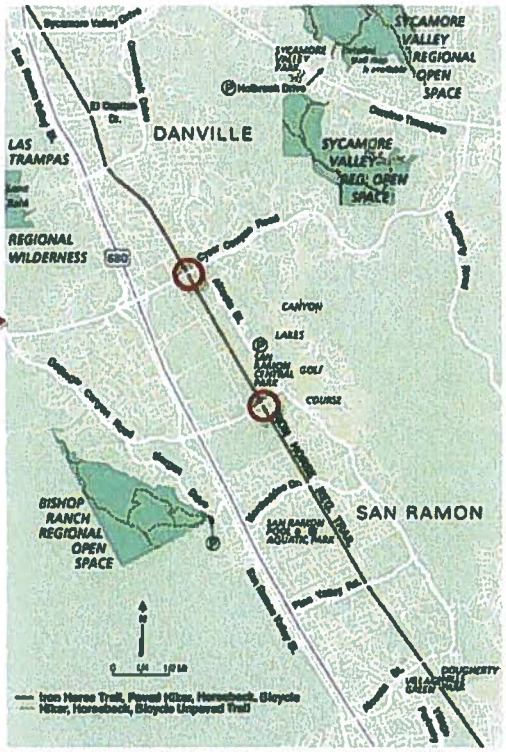
- Introduction – 10 min
- Virtual Site Tour – 10 min
- Brainstorming – 15 min
- Collaborative Map-Making – 30 min
- Visual Preference Survey – 45 min
- Concluding Exercises – 10 min

Iron Horse Trail Overcrossings Design Charrette

Virtual Site Tour

Overview of project location and existing trail

Iron Horse Trail Overcrossings Design Charrette

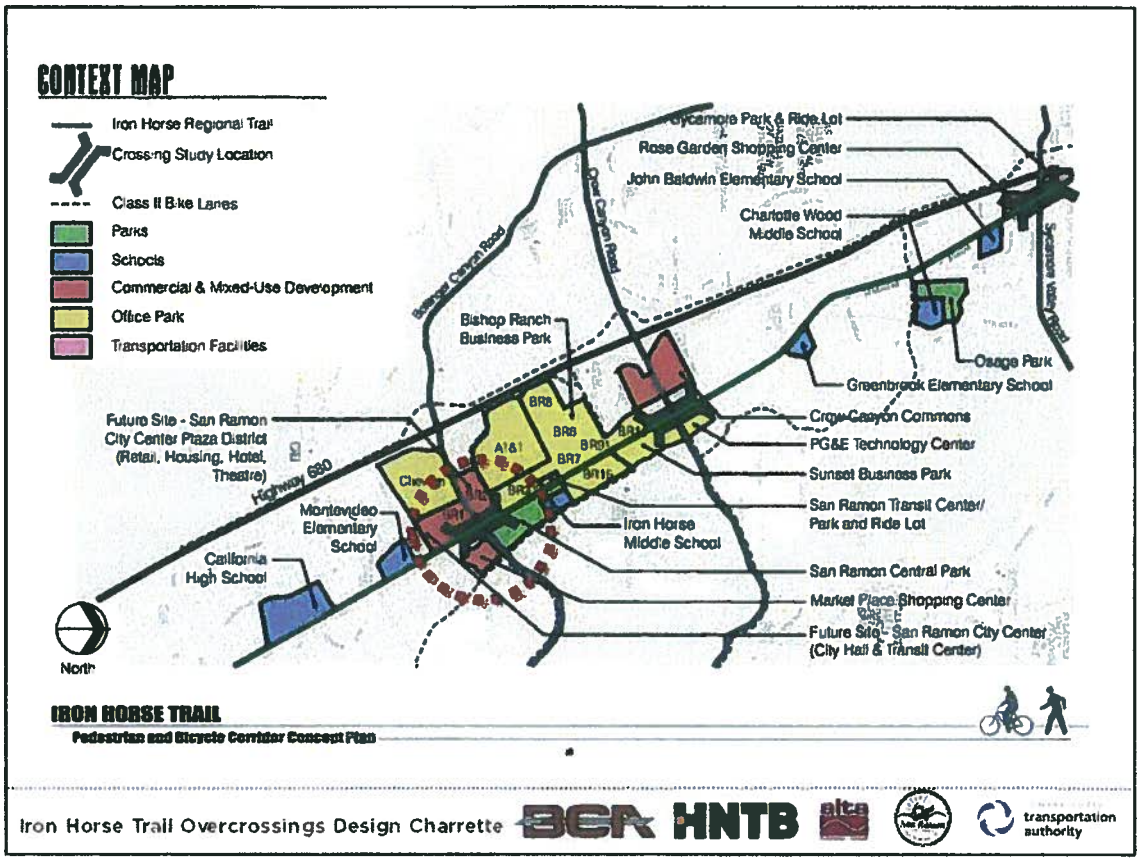


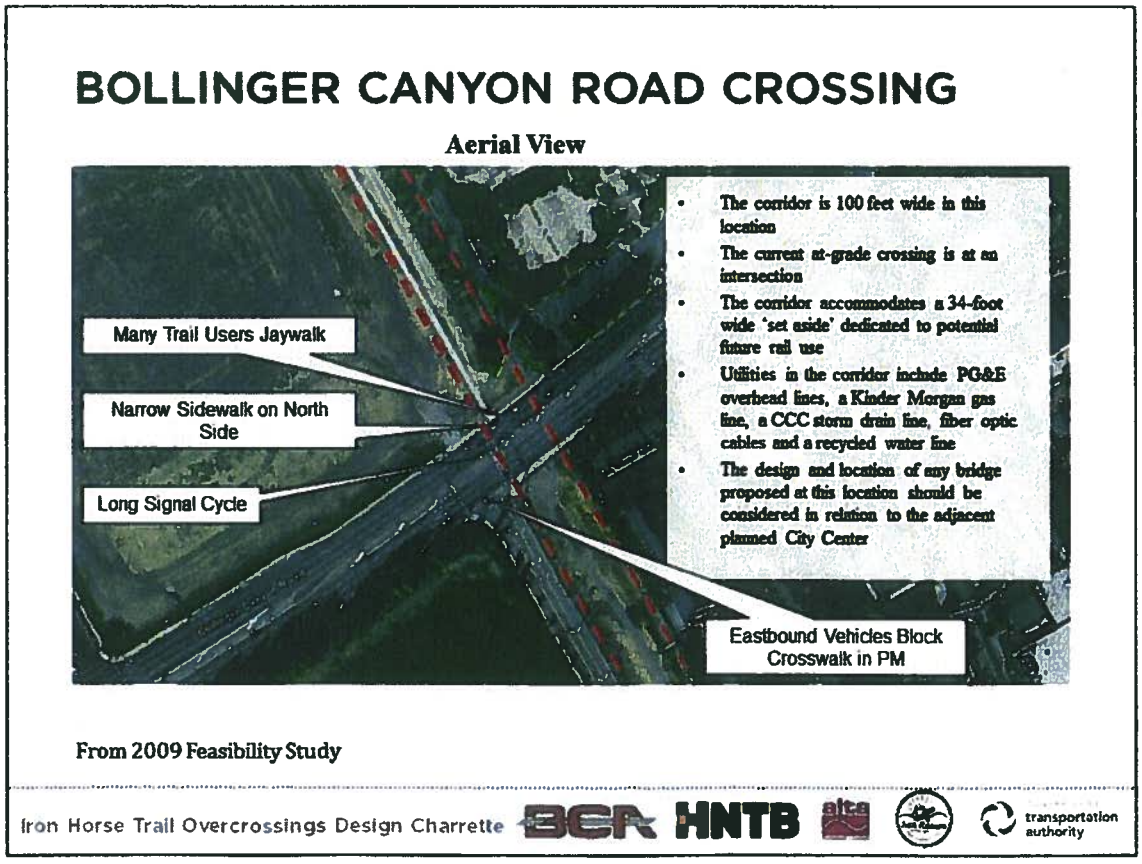
Iron Horse Trail

- **Paved, multi-use trail from Concord to Dublin**
- **Follows the Southern Pacific Railroad San Ramon branch right-of-way**

History of the Iron Horse Trail

- **Southern Pacific Railroad's San Ramon Valley Branch Line, built early 1890s**
- **Southern Pacific abandoned the line in 1978**
- **Contra Costa County purchased the right-of-way during 1983-1989**
- **Corridor is now managed by Contra Costa County Public Works, East Bay Regional Park District, and the Contra Costa County Redevelopment Agency**


CONTEXT MAP
Iron Horse Regional Trail
Crossing Study Location
Class II Bike Lanes
Parks
Schools
Commercial & Mixed-Use Development
Office Park
Transportation Facilities
Sycamore Park & Ride Lot
Rose Garden Shopping Center
John Baldwin Elementary School
Charlotte Wood Middle School
Bollinger Canyon Road
Crow Canyon Road
Bishop Ranch Business Park
Osage Park
Greenbrook Elementary School
Future Site - San Ramon City Center Plaza District (Retail, Housing, Hotel, Theatre)
Crow Canyon Commons
PG&E Technology Center
Sunset Business Park
San Ramon Transit Center/ Park and Ride Lot
Highway 680
Montevideo Elementary School
Iron Horse Middle School
California High School
San Ramon Central Park
Market Place Shopping Center
Future Site - San Ramon City Center (City Hall & Transit Center)
North
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority


BOLLINGER CANYON ROAD CROSSING
Aerial View
Many Trail Users Jaywalk
Narrow Sidewalk on North Side
Long Signal Cycle
Eastbound Vehicles Block Crosswalk in PM
The corridor is 100 feet wide in this location
The current at-grade crossing is at an intersection
The corridor accommodates a 34-foot wide 'set aside' dedicated to potential future rail use
Utilities in the corridor include PG&E overhead lines, a Kinder Morgan gas line, a CCC storm drain line, fiber optic cables and a recycled water line
The design and location of any bridge proposed at this location should be considered in relation to the adjacent planned City Center
From 2009 Feasibility Study
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority

BOLLINGER CANYON ROAD CROSSING

View north across Bollinger Canyon Rd

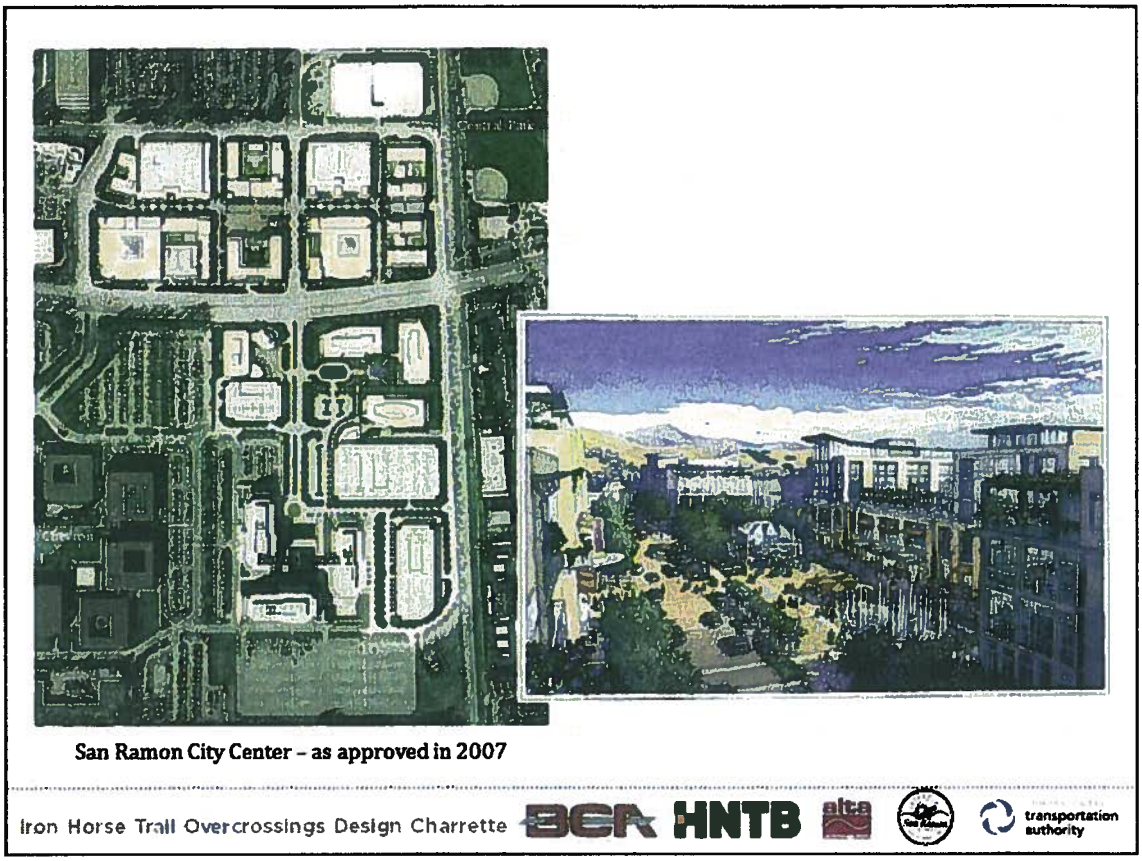
View east along Bollinger Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

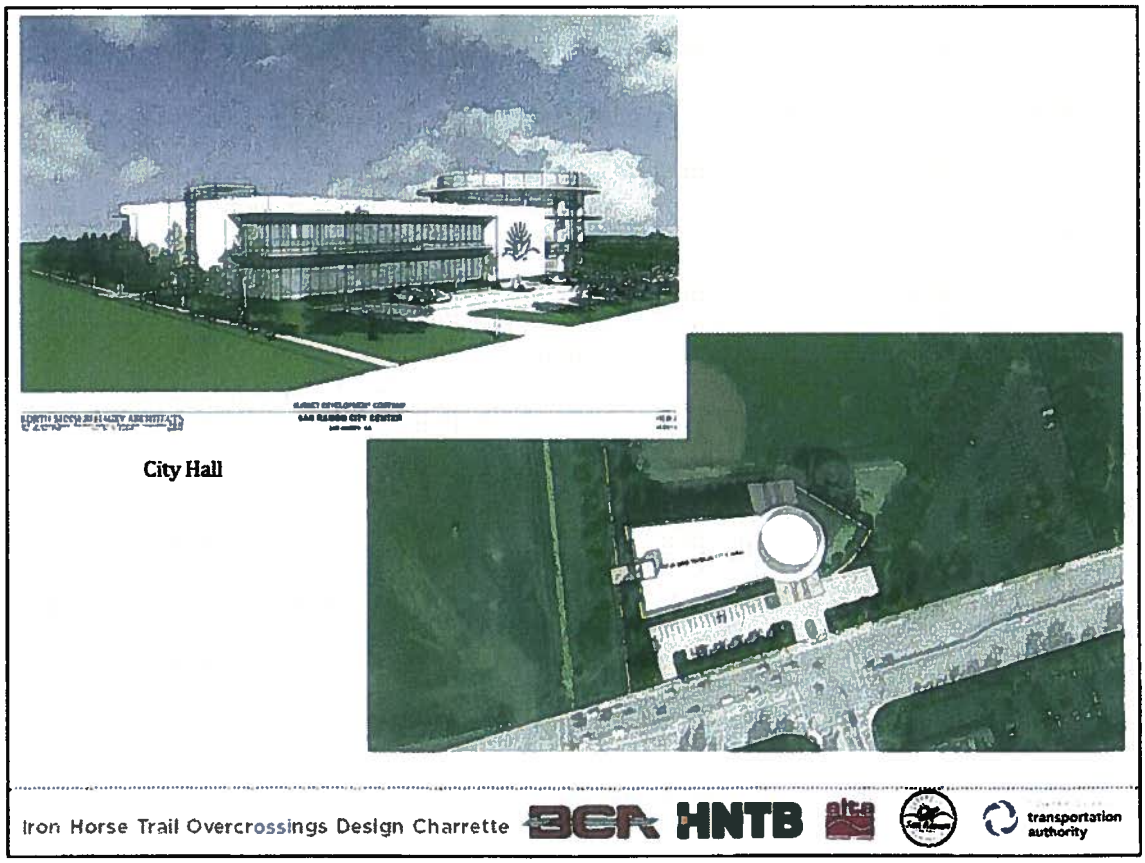
BOLLINGER CANYON ROAD CROSSING

Views south across Bollinger Canyon Rd

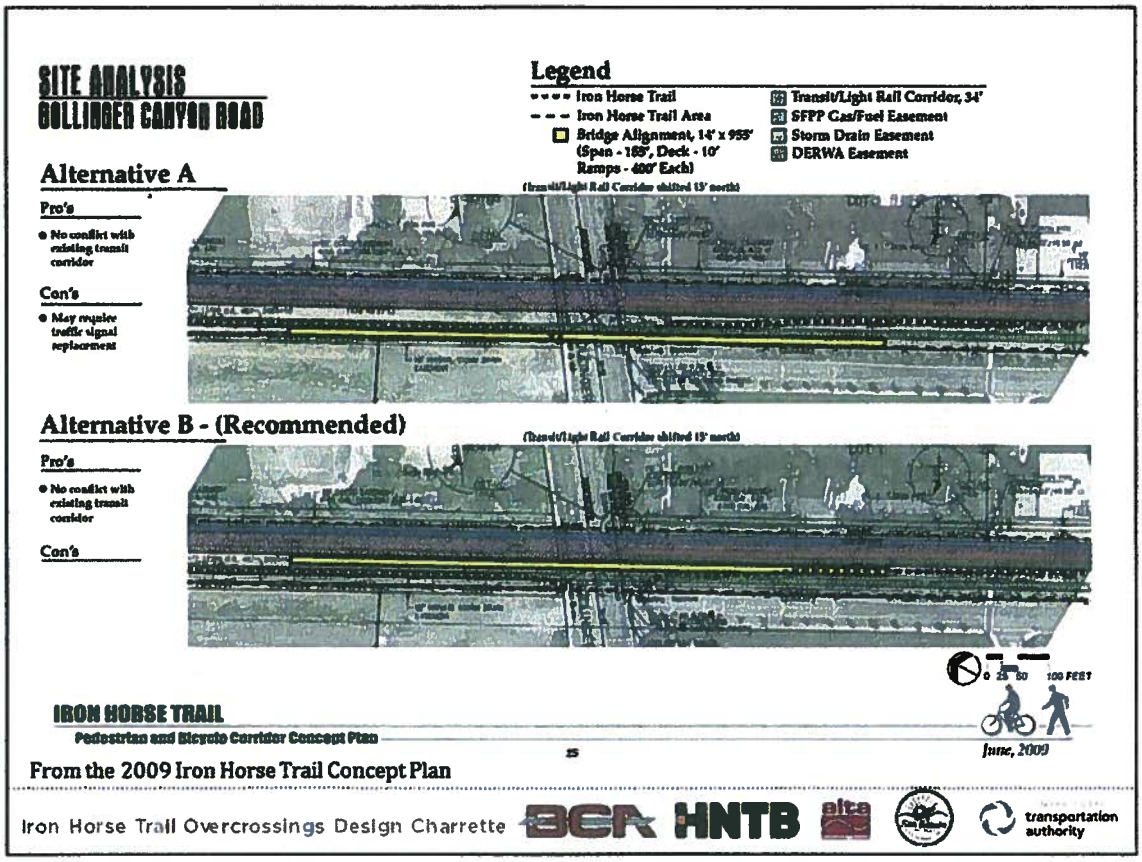
Iron Horse Trail Overcrossings Design Charrette

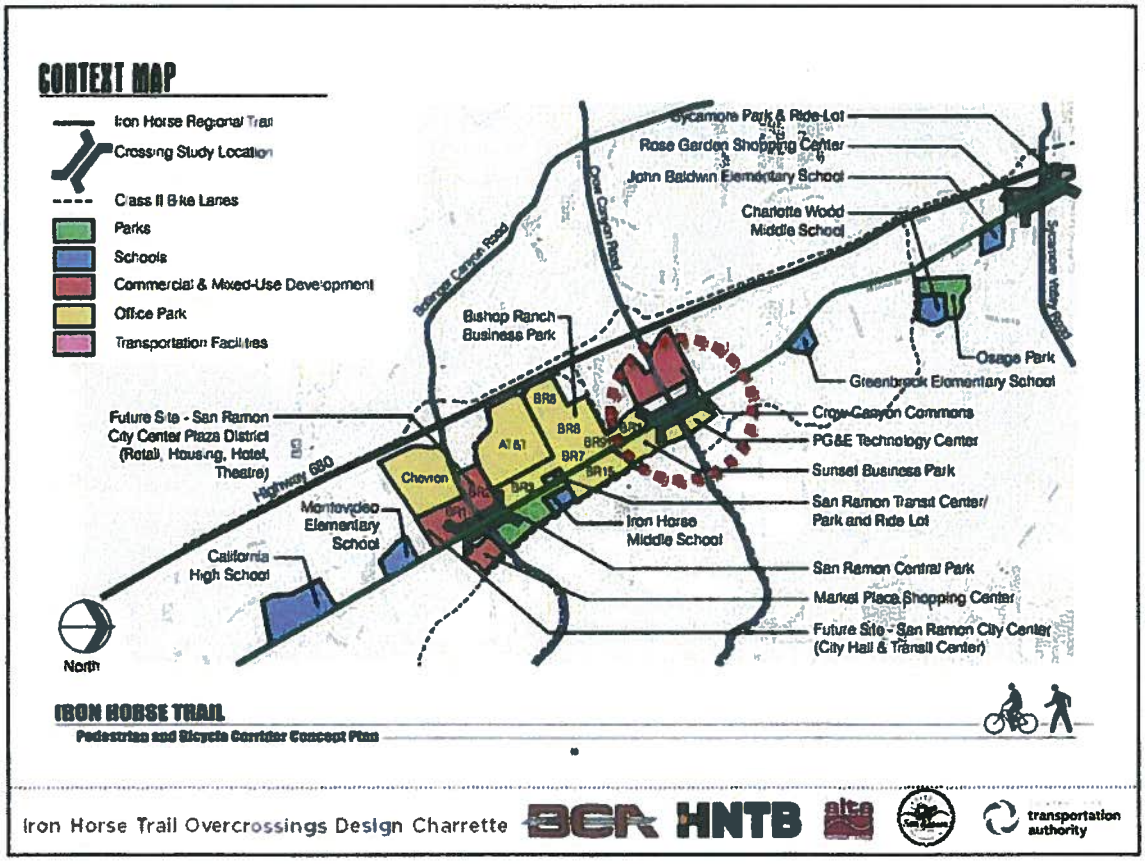


San Ramon City Center – as approved in 2007



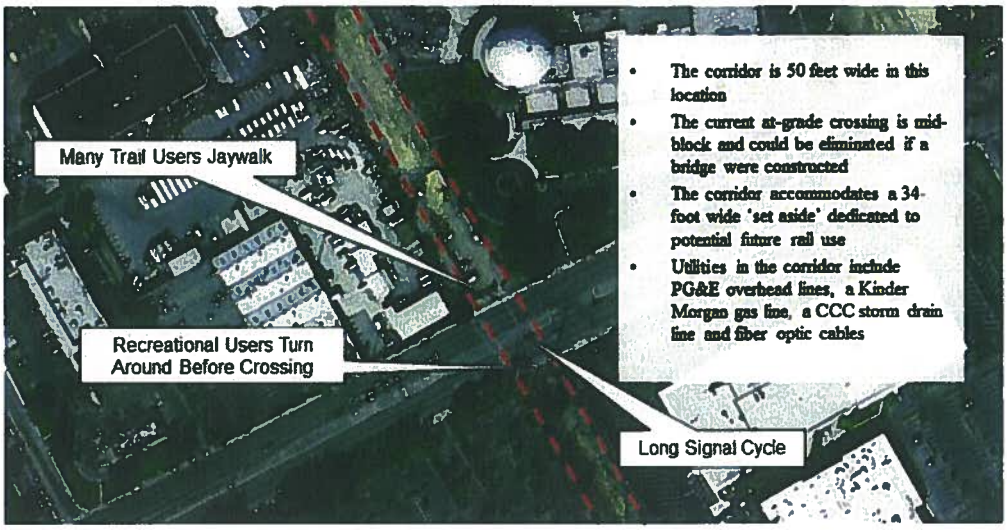
City Hall


SITE ANALYSIS
BOLLINGER CANYON ROAD
Legend
Iron Horse Trail
Iron Horse Trail Area
Bridge Alignment, 14' x 955' (Span - 185', Deck - 10' Ramps - 400' Each)
Transit/Light Rail Corridor, 34'
SFPP Gas/Fuel Easement
Storm Drain Easement
DERWA Easement
Alternative A
Pro's
• No conflict with existing transit corridor
Con's
• May require traffic signal replacement
Alternative B - (Recommended)
Pro's
• No conflict with existing transit corridor
Con's
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
June, 2009
From the 2009 Iron Horse Trail Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
transportation authority


CONTEXT MAP
Iron Horse Regional Trail
Crossing Study Location
Class II Bike Lanes
Parks
Schools
Commercial & Mixed-Use Development
Office Park
Transportation Facilities
Sycamore Park & Ride Lot
Rose Garden Shopping Center
John Baldwin Elementary School
Charlotte Wood Middle School
Bollinger Canyon Road
Crow Canyon Road
Bishop Ranch Business Park
Osage Park
Greenbrook Elementary School
Crow Canyon Commons
PG&E Technology Center
Sunset Business Park
San Ramon Transit Center/ Park and Ride Lot
San Ramon Central Park
Market Place Shopping Center
Future Site - San Ramon City Center (City Hall & Transit Center)
Future Site - San Ramon City Center Plaza District (Retail, Housing, Hotel, Theatre)
Highway 680
Chevron
AT&T
Montevideo Elementary School
California High School
Iron Horse Middle School
North
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
transportation authority

CROW CANYON ROAD CROSSING

Aerial View



Iron Horse Trail Overcrossings Design Charrette

CROW CANYON ROAD CROSSING

Views north approaching Crow Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

CROW CANYON ROAD CROSSING

Views south approaching Crow Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

SITE ANALYSIS
CROW CANYON ROAD

Proposed Alignment - (Recommended)

Pro's

- No conflict with existing transit corridor
- No trail realignment

Con's

- Conflicts with Storm Drain Easement

Legend

- Iron Horse Trail
- Iron Horse Trail Area
- Bridge Alignment, 14' x 930' (Span - 130', Deck - 10' Ramps - 400' Each) (Transit/Light Rail Corridor shifted 10' north)
- Transit/Light Rail Corridor, 34'
- SFPP Gas/Fuel Easement
- Storm Drain Easement

IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan

25

June, 2009

From the 2009 Iron Horse Trail Concept Plan

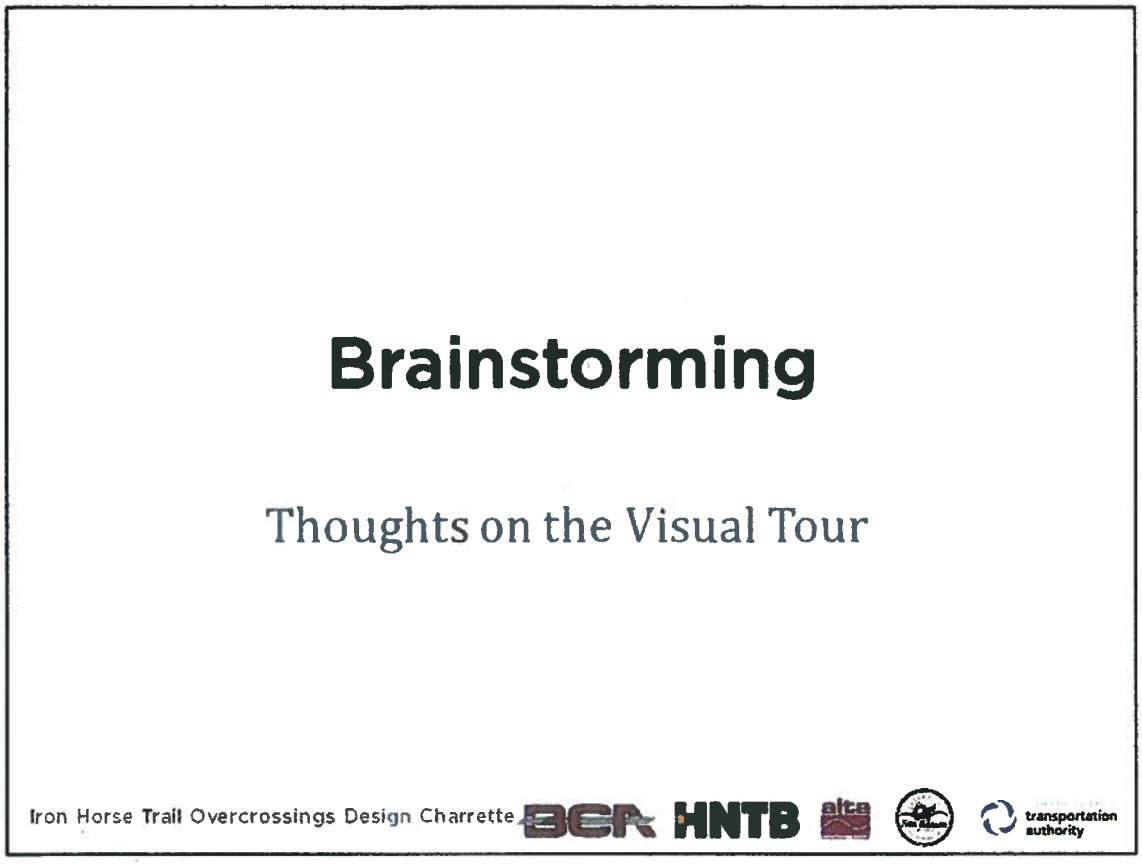
Iron Horse Trail Overcrossings Design Charrette

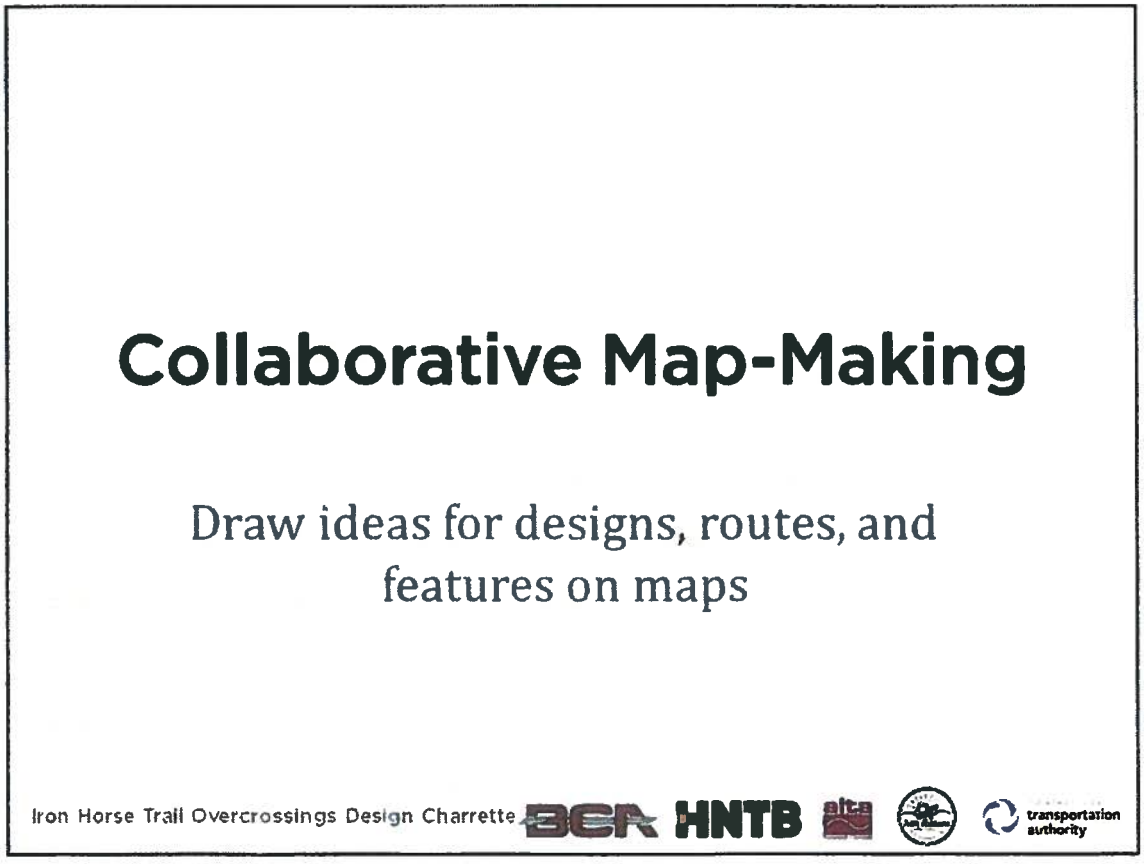
Bike to Work Day

Charrette Schedule

- ✓ Introduction
- ✓ Virtual Site Tour
- ☐ Brainstorming
- ☐ Collaborative Map-Making
- ☐ Visual Preference Survey
- ☐ Concluding Exercises

Iron Horse Trail Overcrossings Design Charrette


Brainstorming
Thoughts on the Visual Tour
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority


Collaborative Map-Making
Draw ideas for designs, routes, and features on maps
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority

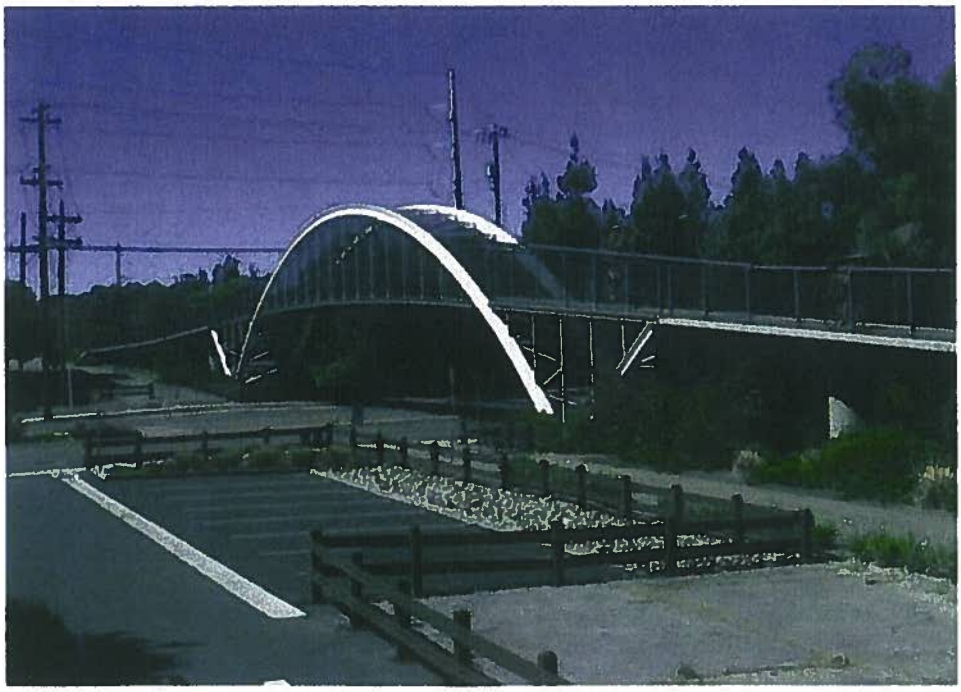
Visual Preference Survey

Rank each of the following bridges
on a scale of 1 (worst) to 5 (best)
for Design, Materials, and Color.

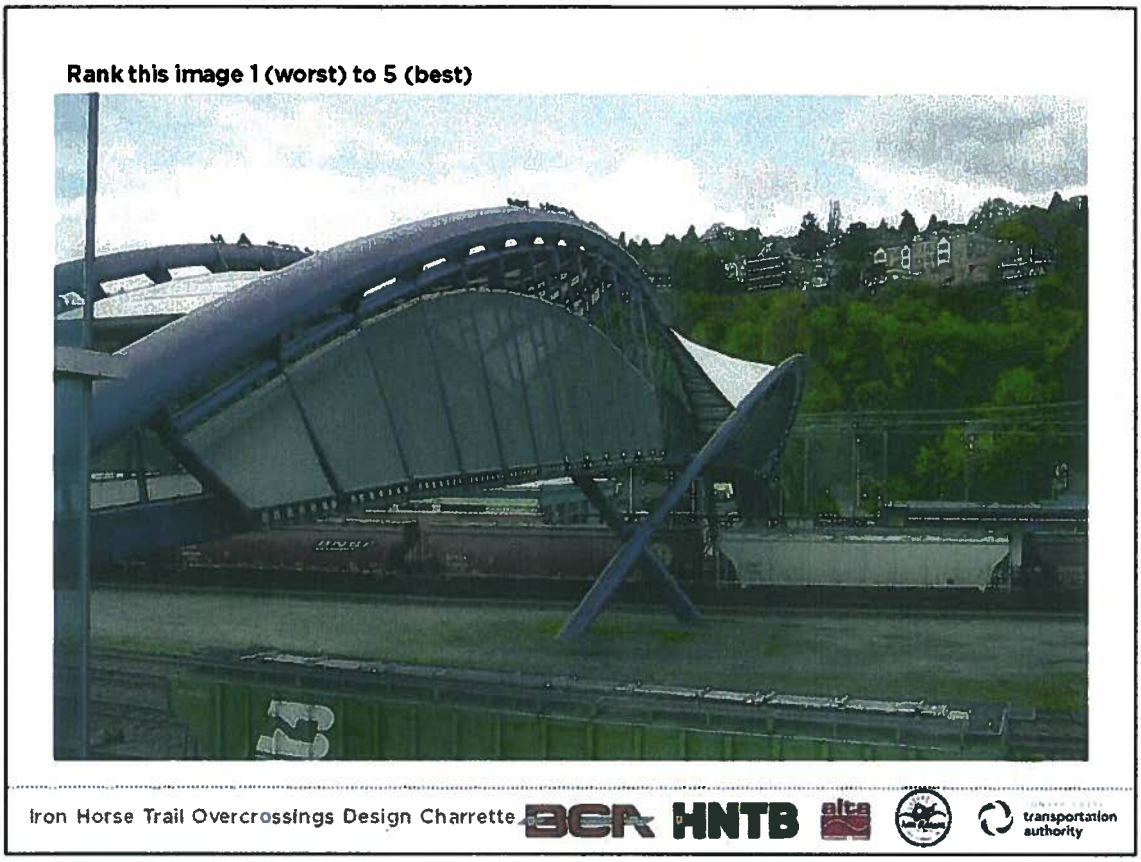
Think about how each fits (or doesn't fit) with
your vision for the community.

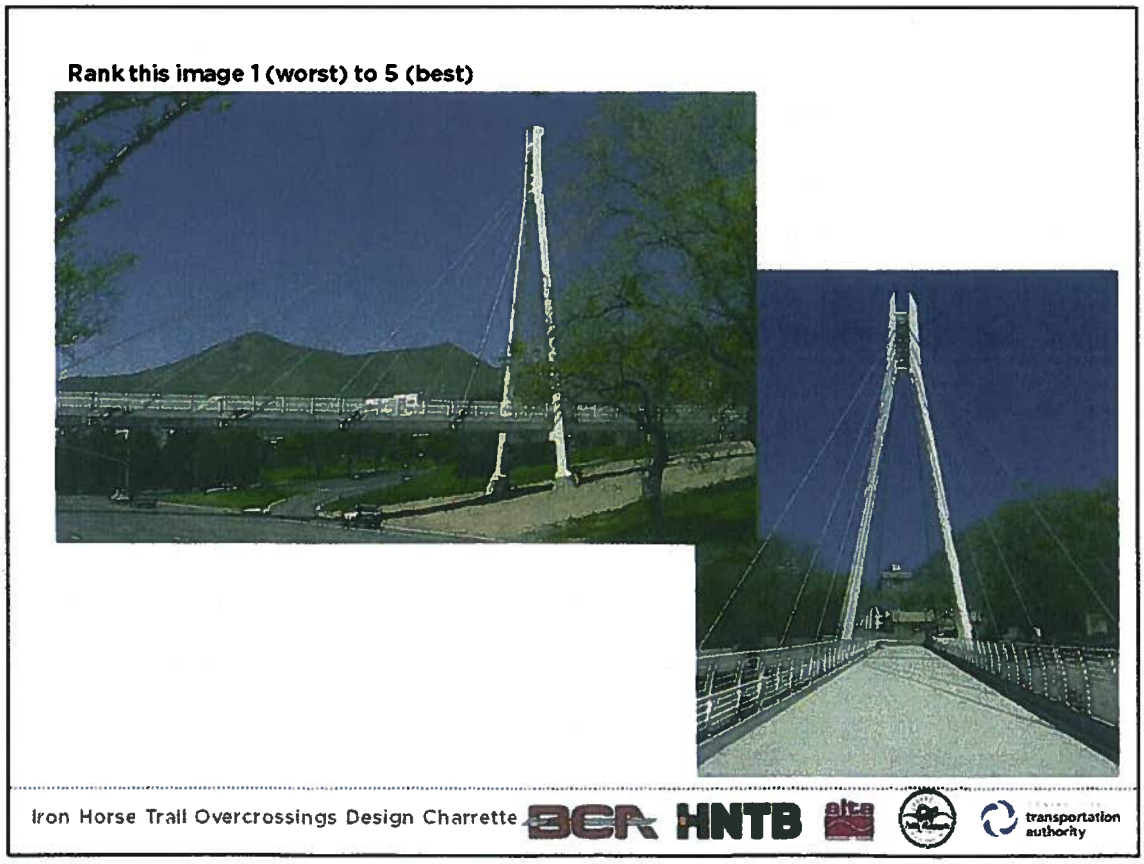
Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

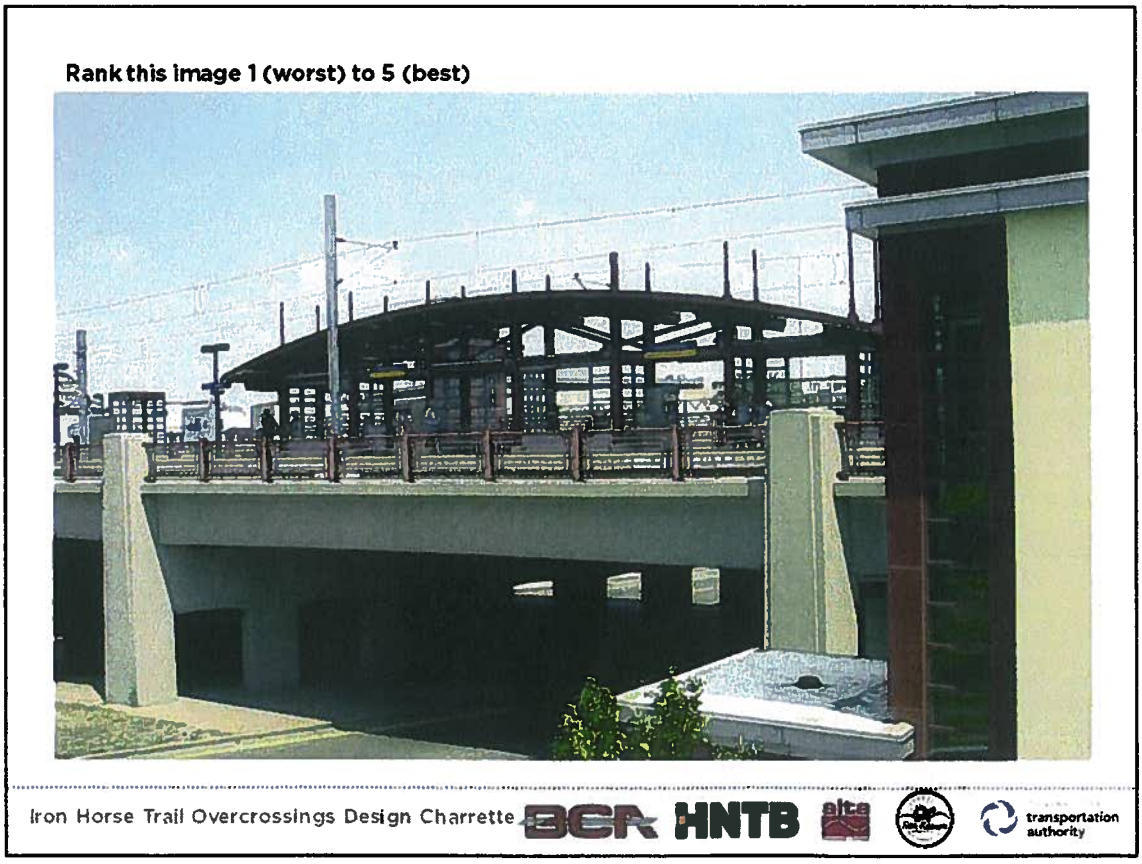


Iron Horse Trail Overcrossings Design Charrette

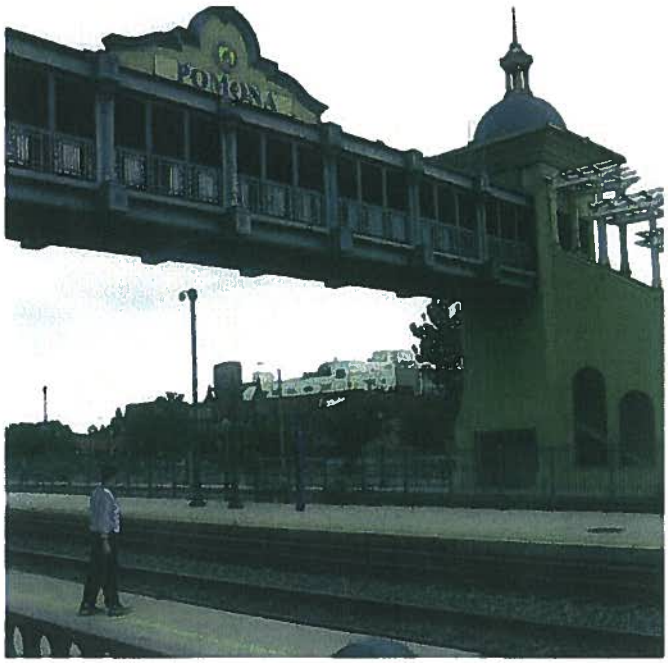

Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority

Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

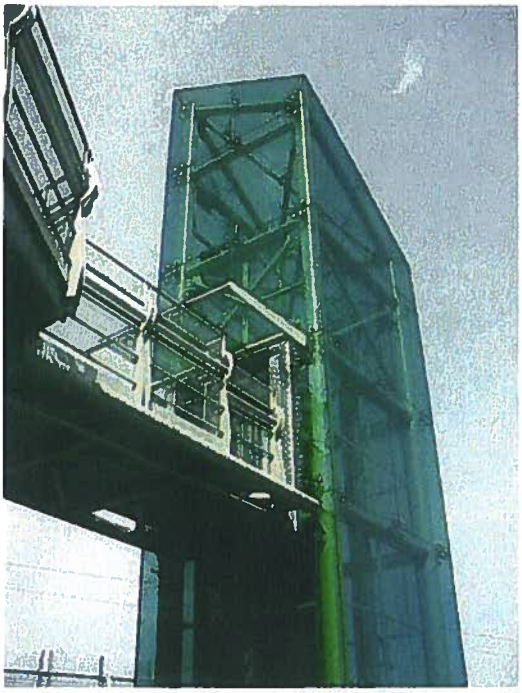
Rank this image 1 (worst) to 5 (best)

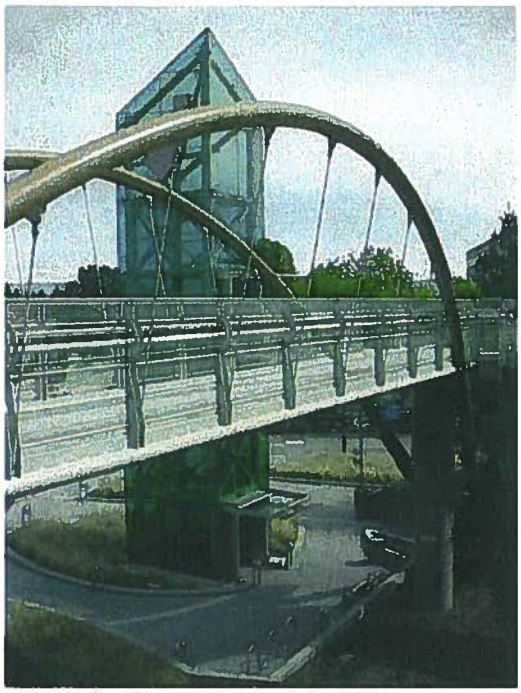
Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)





Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

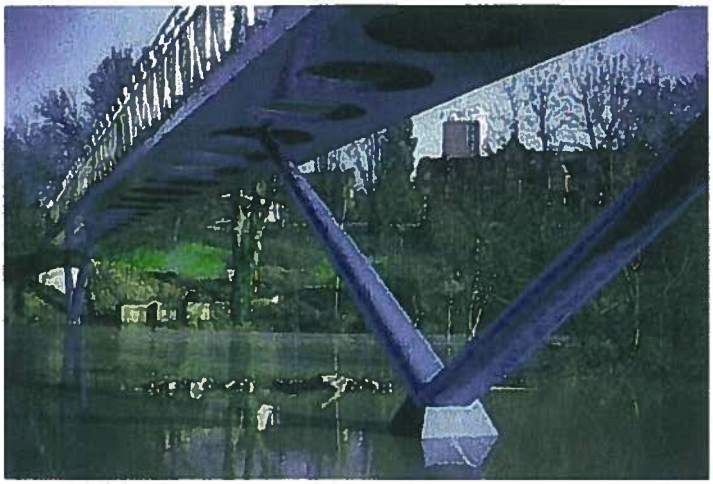
Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Appendix B: Marked-up Maps

Figure 0-1: Bollinger Canyon Road Map from May 20 Charrette

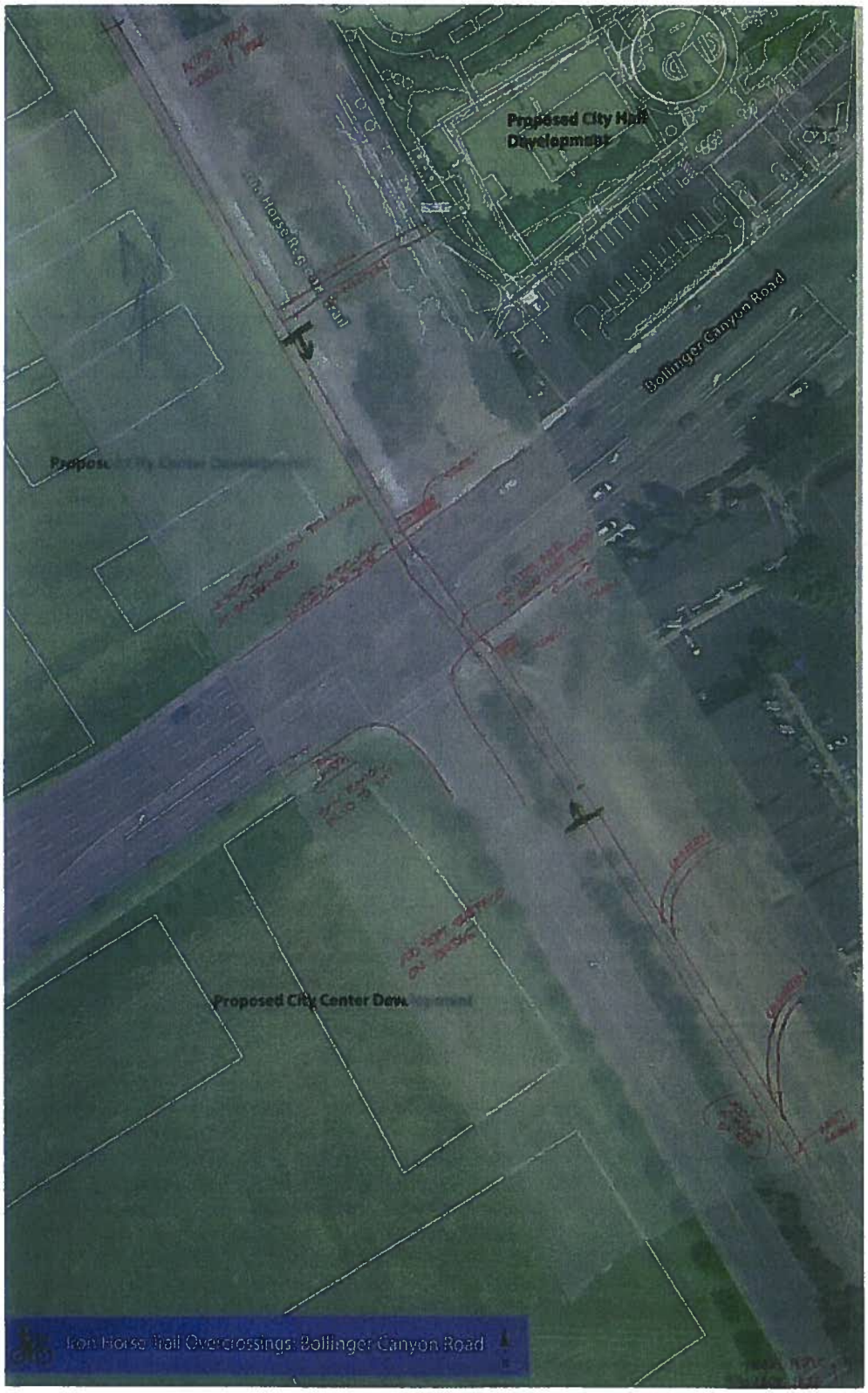
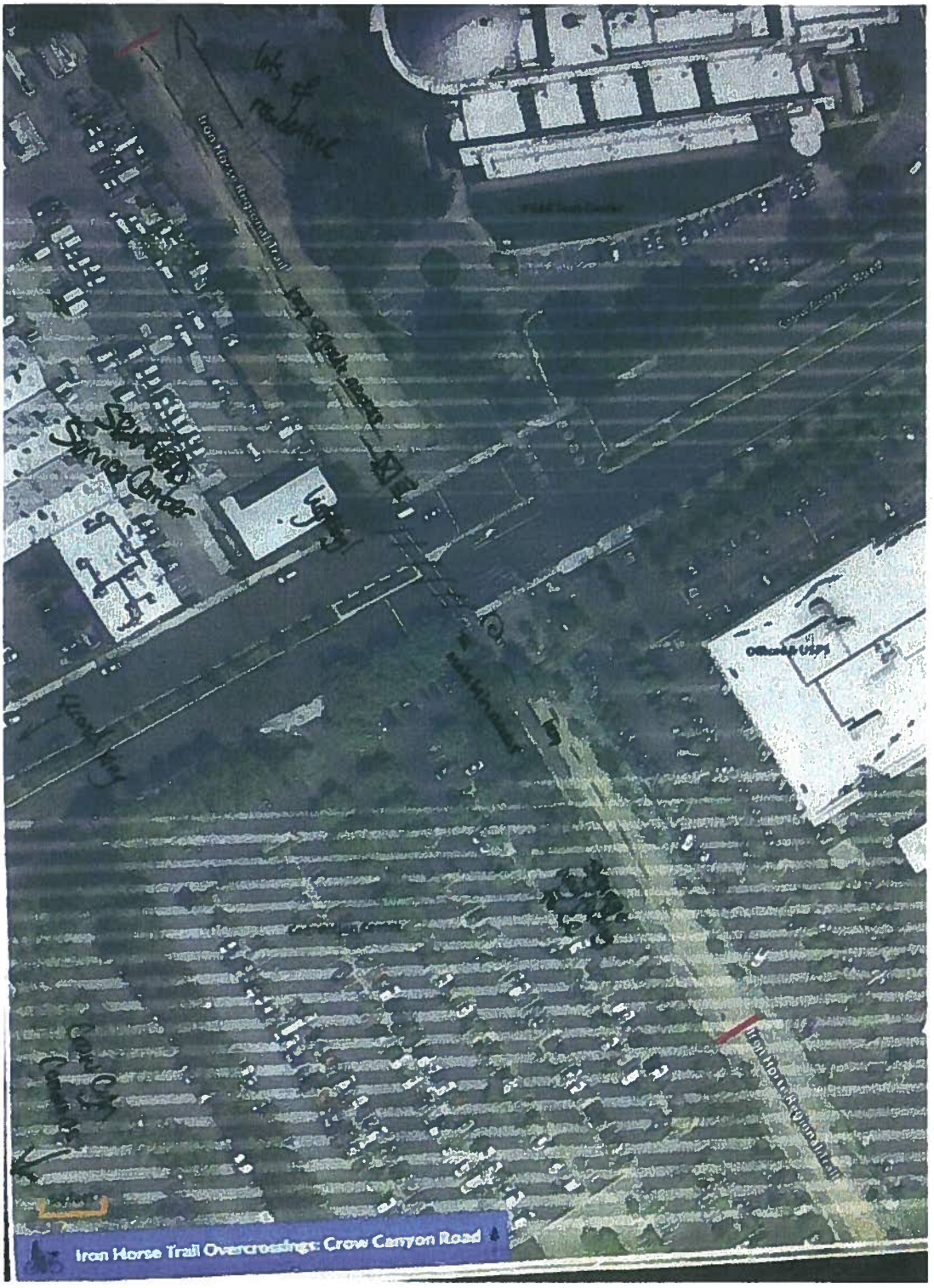


Figure 0-2: Crow Canyon Road Map from May 20 Charrette

Figure 0-3: Bollinger Canyon Road Map from June 9 Charrette

Figure 0-4: Crow Canyon Road Map from June 9 Charrette



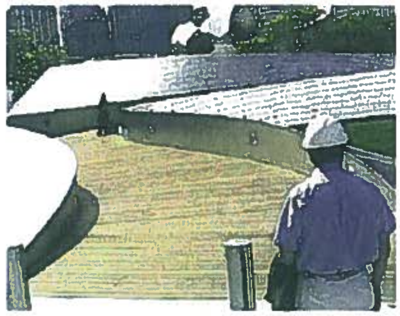
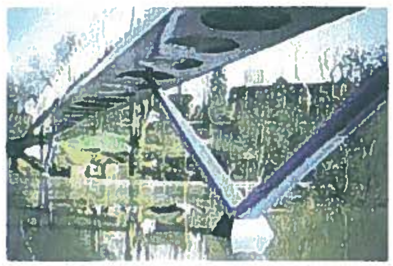
Appendix C: Visual Preference Survey Form

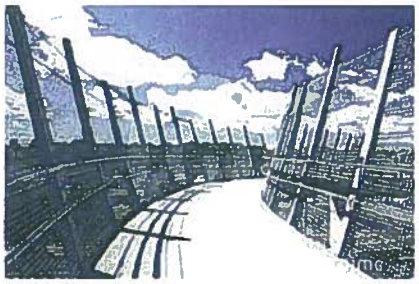
San Ramon Valley Iron Horse Trail – Design Charrette – Visual Preference Survey

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Appendix D: Online Visual Preference Survey Form

Included on the following pages.

City Council Staff Reports and Presentations

CITY COUNCIL STAFF REPORT

DATE: **October 28, 2014**

TO: **City Council/City Manager**

FROM: **Phil Wong, Community Development Director**
By: Lisa Bobadilla, Transportation Division Manager

SUBJECT: **San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project Status Update - Community Engagement/Outreach Component**

RECOMMENDED ACTION

Staff recommends that the City Council accept the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project Status Update – Community Engagement/Outreach Component.

BACKGROUND/DISCUSSION

The City has secured the appropriation of $620,000 in Contra Costa Measure J Transportation for Livable Communities (CC-TLC) funding to initiate the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (Community Engagement/Preliminary Design); of which $200,700 has been allocated to the Community Engagement/Outreach and Preliminary Design component.

Prior to the allocation of the TLC grant, staff completed tasks related to the Project, including:

1. San Ramon Valley Iron Horse Trail Corridor Concept Plan – Finalized 2009;
2. Developed and circulated a Request for Proposals for Phase Two – Community Engagement/Outreach and Preliminary Design (December 18, 2012);
3. Conducted a Bidders Conference (January 15, 2013);
4. Received Proposals from 7 Firms (February 1, 2013);
5. Conducted oral board consisting of staff members from San Ramon, Contra Costa County Public Works, Sunset Development, and East Bay Regional Park District;
6. Selected Biggs Cardosa Associates (BCA) Inc. to implement Phase II – Community Engagement and Preliminary Design; and
7. Presented informational report to San Ramon Policy Committee (May 22, 2013).

In 2004, voters of Contra Costa County approved Measure J, a ½-cent transportation sales tax program. Measure J includes Capital Improvement Projects and Countywide Capital and Maintenance Programs. Program Number 12 is titled - Transportation for Livable Communities (CC-TLC). In the Expenditure Plan - CC-TLC program description is as follows:

The CC-TLC Program is intended to support local efforts to achieve more compact, mixed-use development, and development that is pedestrian-friendly or linked into the overall transit system. The program will fund specific transportation projects that: (a) facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development, or (b) encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling and/or transit usage. Typical investments include pedestrian, bicycle and streetscape facilities, traffic calming and transit access improvements. Both planning grants and specific transportation capital projects may receive funding under this program.

Jurisdictions will be eligible for projects that meet the eligibility criteria only if they are in compliance with the Growth Management Program at the time a grant is approved for funding allocation by the Authority. Eligible projects will be recommended to the Authority by each sub region based on a three- or five-year funding cycle, at the option of the Regional Transportation Planning Committee. Subregional programming targets will be based on the relative population share of the each in 2009, and adjusted every five years thereafter. Criteria are to include flexibility so that urban, suburban, and rural communities can be eligible.

On November 12, 2013, Council approved Resolution No. 2013-102, authorizing the Mayor to Execute a Contract between the City of San Ramon and Biggs Cardosa Associates, Inc. to implement the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Overcrossing at Bollinger Canyon Road and Crow Canyon Road (CIP #5530 and 5531), in an amount not to exceed $200,700.

To date, staff and the Consultant Team have completed, and are in the process of completing a number of work tasks, including:

- Establish Project Development Team - Completed
- Initiate Site Evaluations - Completed
- Develop Public Outreach Campaign - Completed
- Implement Community Design Charrettes – Completed
- Implement Website/Online Survey/Social Media – In progress
- Develop Design Alternatives – In progress
- Solicit input from City Committees/Commissions – In progress
- Solicit Community Feedback Forums – In progress

Over the course of the next two months, staff and the Consultant Team will proceed and implement multiple outreach endeavors, including:

1. Implement the City of San Ramon on-line Open Government survey – residents and the community at-large will have an opportunity to provide comments and feedback on the architecture of 21 bridge concepts. The on-line survey will be available beginning Thursday, October 30 through Wednesday, November 26;
2. Attend San Ramon Farmers Market;
3. In concert with East Bay Regional Park District and Consultant Team, install signage along the Iron Horse Trail informing the public to provide comment/feedback; and
4. Solicit input from Committees/Commissions

A report will be presented to Council in January 2015 with the results of this phase of Community Engagement/Outreach component, including the results from the on-line survey and farmers market.

FISCAL ANALYSIS

The Community Engagement/Outreach Component of the Project is funded with a CC-TLC grant in the amount of $200,700. There are no direct impacts to the City's General Fund.

STEPS FOLLOWING APPROVAL

1. Implement the City of San Ramon on-line Open Government survey – residents and the community at-large will have an opportunity to provide comment and feedback on the architecture of 21 bridge concepts. The on-line survey will be available beginning Thursday, October 30 through Wednesday, November 26;
2. Attend San Ramon Farmers Market;
3. In concert with East Bay Regional Park District and Consultant Team, install signage along the Iron Horse Trial informing the public to provide comment/feedback; and
4. Solicit input from Committees/Commissions.

ATTACHMENT

Attachment A: Technical Memo – Design Charrette Process & Community Feedback

Technical Memo

Design Charrette Process & Community Feedback

Iron Horse Regional Trail Overcrossings
at Bollinger Canyon Road and Crow Canyon Road

San Ramon, CA

June 2014

Table of Contents

1 Project Overview

The City of San Ramon is currently studying two proposed bicycle and pedestrian overcrossings along the Iron Horse Regional Trail, at Bollinger Canyon Road and Crow Canyon Road. A feasibility study conducted in 2009 identified these two overcrossings as important connections to improve accessibility, safety, and traffic operations.

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon Road and Crow Canyon Road crossings.

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase. At Crow Canyon Road, the Iron Horse Regional Trail crossing does not align with a cross street, and instead has a dedicated signalized crossing for trail users.

In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the two overcrossings, whether to maintain the at-grade crossing facilities, and the design aesthetic for each location.

2 Design Charrette Process

On May 20 and June 9, 2014, the consultant team, led by Biggs Cardosa Associates, Inc., held two public design charrettes to gather input on alignment and design of the proposed Iron Horse Regional Trail overcrossings at Bollinger Canyon Road and Crow Canyon Road.

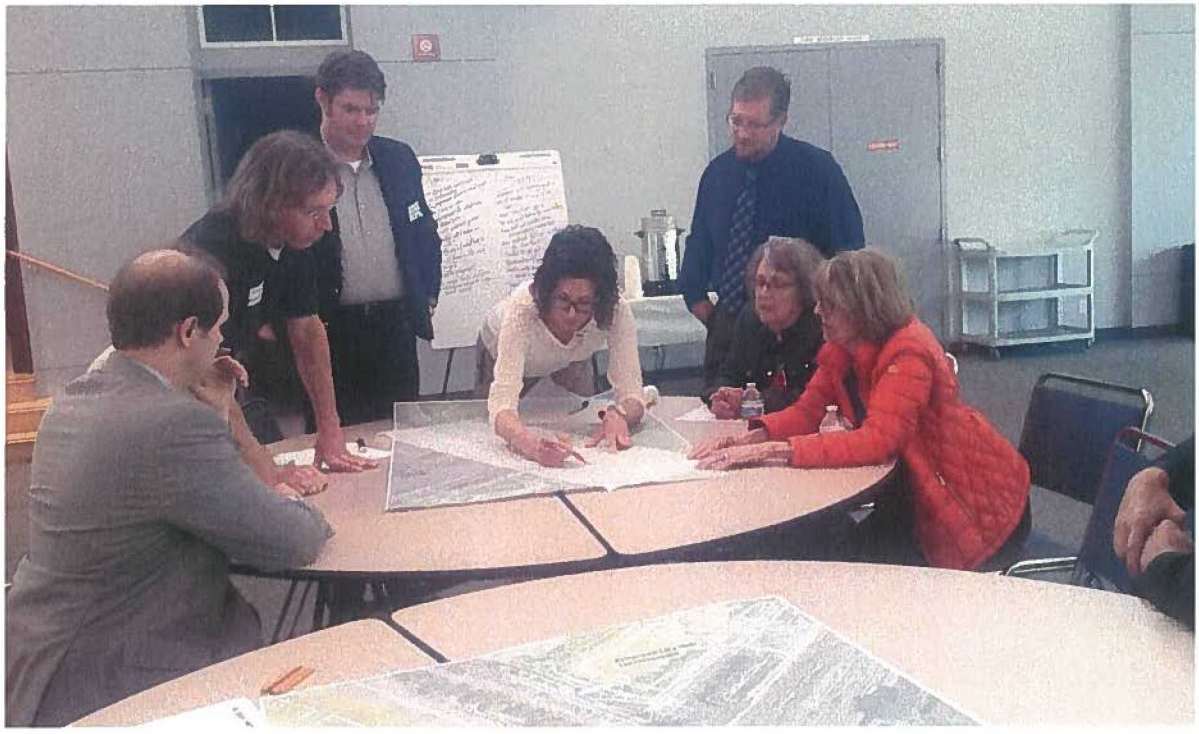
The two design charrettes, facilitated by Alta Planning + Design, were two-hours in length and held on weekday evenings at the San Ramon Community Center. A total of 23 people attended the sessions, including residents of San Ramon and neighboring communities along the trail.

Participants first viewed a virtual site tour that reviewed the location of each crossing, surrounding land uses and points of interest, and potential alignments for each overcrossing identified in the 2009 feasibility study. After this overview and a virtual site tour, participants were guided through a series of exercises to capture the challenges, opportunities, and community needs for the crossing alignments and designs. The presentation used is included in Appendix A.

This memo describes each of these exercises, and describes the key findings of the design charrettes.

3 Brainstorming & Mapmaking

A brainstorming session captured charrette participants' initial reactions to the virtual site tour, as well as general thoughts on how the two overcrossings will fit with the community. Following this, participants were invited to draw potential overcrossing configurations and other details on large maps of each site. These comments and concerns are discussed for each crossing below, and the marked-up maps can be seen in Appendix B.



Charrette participants brainstorm ideas for the overcrossing at Bollinger Canyon Road

3.1 General Comments

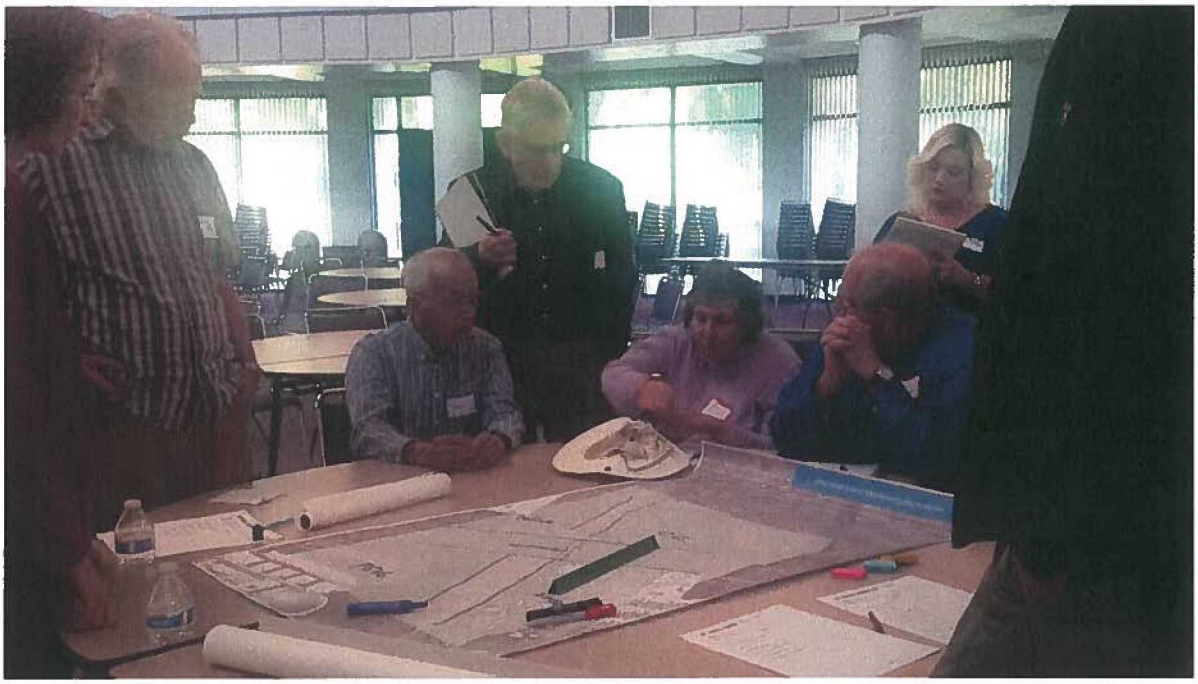
The community expressed some comments applicable to the entire study process, including:

- Support for both overcrossings, although Bollinger Canyon Road was identified as a priority over Crow Canyon Road;
- Overcrossings will benefit motorists and pedestrians traveling along the roadways in addition to trail users, by minimizing signal delays;

They also made several general suggestions to be considered for both overcrossings as the planning process advances. These ideas include:

- Preserving the character of the Iron Horse Regional Trail;

- Using surface treatments that accommodate the various users of the trail, including cyclists, joggers, and those using mobility devices;
- Providing places to gather;
- Considering the spaces underneath the overcrossings, and activating these spaces into inviting community gathering places like skate parks or farmer's markets.



Participants marking ideas for potential overcrossing alignments at Crow Canyon Road

3.2 Bollinger Canyon Road Summary Comments

The trail crossing at Bollinger Canyon Road provides an opportunity to tie the Iron Horse Regional Trail to planned developments on adjacent parcels, including a vibrant city center and new city hall.

Charrette participants noted a number of existing conditions about this location that they feel will be important for the City to consider as they move forward with designs. These include:

- This section of trail is heavily used by children on their way to school or the nearby skate park;
- Traffic here is unpredictable;
- The current trail crossing creates delays for both trail users and motorists;
- Occasional gridlock occurs on Bollinger Canyon Road; and
- There is a desire to separate pedestrians, bicyclists and motorists.

Suggestions for the alignment and configuration of the crossing include:

- Maintain the at-grade crossing to facilitate bicycle and pedestrian access to new destinations;

- Improve the crossing to increase visibility for motorists and prevent conflicts;
- Consider providing access to the trail at locations other than Bollinger Canyon Road—for example, link the upper level of the new city hall to the overcrossing with an elevated walkway;
- Installing a sidewalk/sidepath along Bollinger Canyon Road from San Ramon Boulevard to the Iron Horse Regional Trail;
- Widening the sidewalk along the north side of Bollinger Canyon Road;
- Incorporate clear glass blocks into the overcrossing to allow light to pass through;
- Add stairs or other vertical access to the overcrossing at the sidewalk along Bollinger Canyon Road on either side;
- Include changeable message board for information about community events or festivals;
- Protect views of the hills;
- Consider adding green space at the top; and
- Incorporate real-time feedback on calories burned or number of users.

3.3 Crow Canyon Road Summary Comments

At Crow Canyon Road, the trail character is more natural feeling, and surrounded by lower-density uses that generate less bicycle and pedestrian traffic.

Charrette participant observations on the existing conditions at Crow Canyon Road include:

- The most common use of the trail in this location is as a thoroughfare for commuter cyclists on longer rides—although this may change with the added destinations at Bollinger Canyon Road;
- Motion-controlled lights at the Convention Center parking lot are sensitive to wildlife in the area, keeping the trail dark unless someone passes by;
- Both trail users and motorists currently experience long delays at this location; and
- There is a desire to separate pedestrians, bicyclists and motorists.

Ideas generated by charrette participants for what they would like to see included in the future crossing include:

- Careful consideration of wildlife;
- Preserve the rustic character of this portion of the trail;
- Add trees or greenery to shield unsightly adjacent uses from the trail, potentially by transplanting redwoods from a nearby grove that needs to be thinned;
- Eliminate the at-grade crossing to improve traffic flow, reduce pollution from idling vehicles, and discourage bicyclists and pedestrians from crossing at this location;
- Maintain at-grade access to sidewalks and provide stairs, elevators, or corkscrew ramps to access the overcrossing;
- Incorporating branding for San Ramon into the overcrossing;

- Landscaping the existing median more fully;
- Acknowledging/preserving trail artifacts and corridor history; and
- Crossings should have high fences/railings to prevent debris from being thrown into the road below.

4 Visual Preference Survey

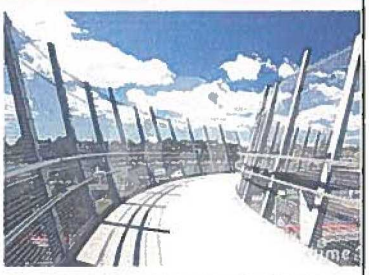
The closing exercise for the design charrettes was a visual preference survey to collect input on the aesthetic preferences for the two proposed overcrossings. Participants were shown images of 18 different overcrossings and asked to rate each one on how well the design, materials, and color fit Bollinger Canyon Road and Crow Canyon Road. They rated each of these characteristics on a five-point scale, where a score of one indicated strong dislike and a score of five indicated a desirable quality. These scores were averaged across all surveys collected, and then added to give each bridge a total score out of 15. Participants were also invited to comment on any of the bridges to clarify the features they felt strongly fit or clashed with the San Ramon community. A sample of the survey form is included in Appendix C.

Charrette participants fill out Visual Preference Surveys to provide input on design, materials, and color of the proposed overcrossings

4.2 Bollinger Canyon Road Visual Preference Results

High Scores

The following three bridges had the highest overall scores for the Bollinger Canyon Road overcrossing out of 15 possible points.

Highest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Scor	11.8	9.8	9.6
Comments	• Ties in best with city center • Lower arches • Matches design of new San Ramon City Hall • Perhaps too simple, but like cable/tower • Reminiscent of new Bay Bridge	• Practical • Spacious • Needs to be less "meshy" looking • Nice steel, shows the sky • Neat modern design	• Maybe from new San Ramon City Hall to the trail • Modern, glass, suspension • Nice complement to new city center • I like the glass • Unique, open, neutral color • Like the openness

The same three bridges also claimed the two highest-scoring spots across all three individual categories of design, materials, and color.

Participants were attracted to the sleek lines and open designs of these overcrossings, which they feel would tie in well to the planned developments at Bollinger Canyon Road. In their comments, participants expressed a desire for an overcrossing that is modern without being futuristic.

Charrette participants responded positively to bridges using transparent or translucent materials like glass or chain link fence to create safe enclosures while preserving their airiness. A strong visual connection to the new city center and San Ramon City Hall is important, as well.

Other characteristics that were mentioned include blue elements to tie in with the City of San Ramon brand colors, landscaping, and providing elevator access.

Low Scores

The following three bridges had the lowest overall scores for Bollinger Canyon Road out of 15 points, as well as the bottom two scores across each of the three categories.

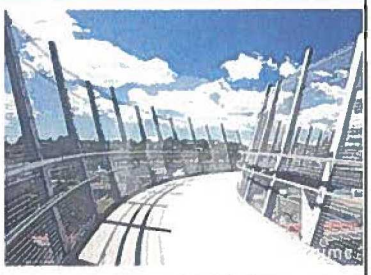
Lowest Scoring Bridges: Bollinger Canyon Road			
Bridge			
Score	5.0	5.7	5.8
Comments	• Too urban • Too much dead space underneath • Too utilitarian for this location	• Smooth out angles • Belongs in an elementary school • Too sharp • Too artsy	• Too enclosed • Interesting, but not for this purpose • "Gather ye hobbits!" • Too artsy

Participants generally disliked designs that were too artsy or too utilitarian, implying a preference for an overcrossing design that has some level of aesthetic appeal without being overly complicated. Bridges that looked old-fashioned, heavy, or industrial were not rated highly, and wooden decking was rejected as too difficult to maintain. Simplistic designs, bland designs, and those that appeared closed-off received similarly low scores.

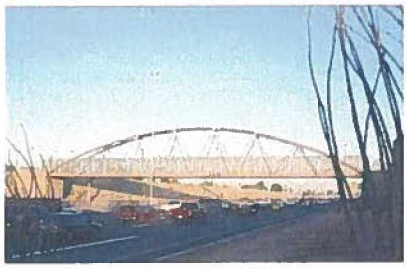
4.4 Crow Canyon Road Visual Preference Results

High Scores

For the Crow Canyon Road overcrossing, participants provided fewer written comments to clarify their desires. The following three bridges were scored highest overall, out of a possible 15 points.

Highest Scoring Bridges: Crow Canyon Road			
Bridge			
Score	9.5	9.5	9.0
Comments	• Safe for street crossing		• Crow is more rustic; iron • Add blue – San Ramon colors

They also received the highest scores for material and colors, while the following bridge claimed the highest average score for design, out of a possible five points.

Highest Scoring Design: Crow Canyon Road	
Bridge	
Score	3.2
Comments	• Add wood

Participants tended to award higher scores to bridges that had a more rustic or traditional design than those they selected for Bollinger Canyon Road. Bridges with curving arches, clean lines, and few frills were ranked among the most preferred designs. Neutral colors including browns, darker colored metals, and earth tones were scored highly, while white was not.

Participants still scored wooden decking unfavorably, but expressed a desire to see more wood elements incorporated into the design of the railings or enclosure of an overcrossing for Crow Canyon Road. One participant suggested incorporated some kind of soft surface for runners, such as decomposed granite.

Low Scores

The following bridges received the lowest overall scores for Crow Canyon Road out of 15 possible points, as well as the lowest scores across each individual category.

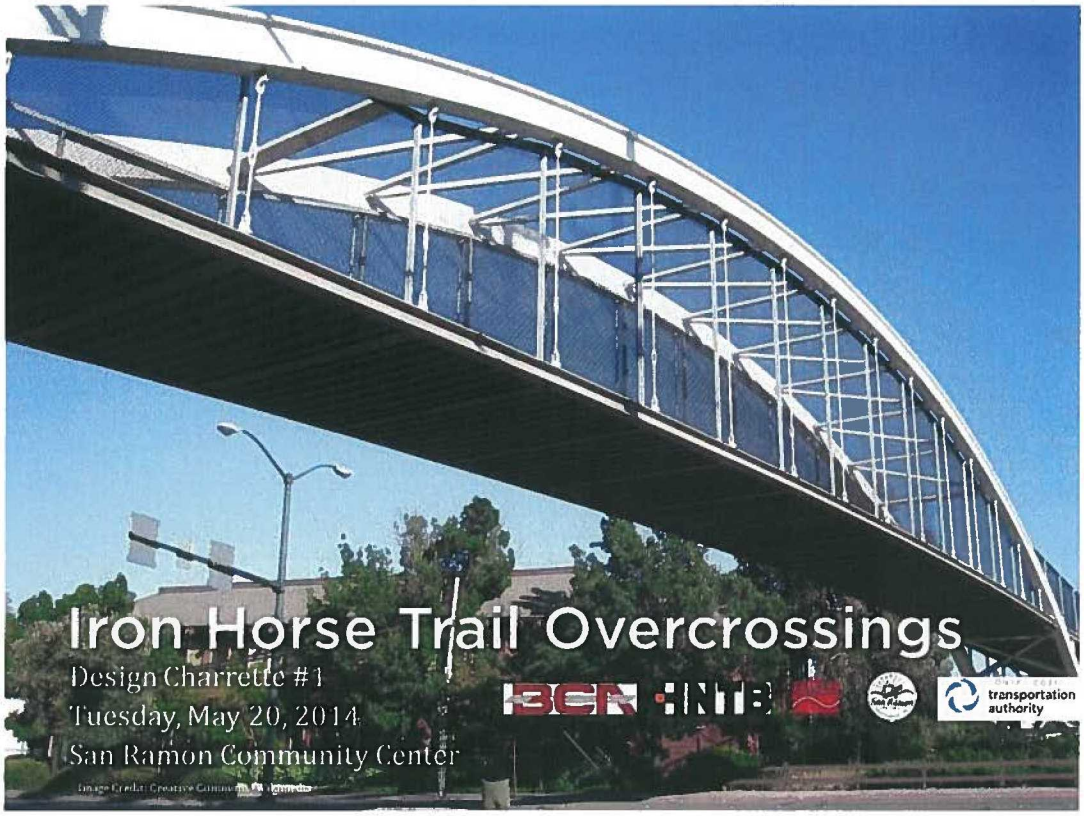
Lowest Scoring Bridges: Crow Canyon Road			
Bridge			
Score	5.8	5.3	5.5
Comments	• Wrong era • Too ornate • Too 'time period' for a place without history	• Too modern	

Once again, overly complex designs were scored poorly by charrette participants. Other undesirable characteristics for the Crow Canyon Road overcrossing include white or blue elements, modern designs, and bridges with stonework or that appear chunky and heavy. Cost was also mentioned, with participants suggesting a more inexpensive design at this location to devote more funding to a larger gateway overcrossing at Bollinger Canyon Road.

5 Next Steps

The results of the design charrettes will be used by the City of San Ramon and the consultant team to develop initial design concepts for the two overcrossings along the Iron Horse Regional Trail. Additional opportunities for public and stakeholder input are incorporated into this phase of the project and sufficient advance notice will provided.

Appendix A: Design Charrette Presentation



The San Ramon Valley Iron Horse Trail Pedestrian Overcrossing Project is separated into three Phases

Phase I – the Corridor Concept Plan – has been completed, and included the City of San Ramon, East Regional Park District, Contra Costa County, Town of Danville, and Contra Costa Transportation Authority.

Phase I evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclists and pedestrians. The Plan evaluated bridge concepts, feasibility, and potential costs. Completed in 2009.

Phase II – is a collaborative effort between San Ramon, Contra Costa County, and the East Bay Regional Park, which owns and maintains the trail.

Phase II will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for next phase and construction.

Phase III – final design, environmental approval, and construction of the overcrossing.

Iron Horse Trail Overcrossings Design Charrette BCA HNTB alta transportation authority

Before we embarked on Phase II:

We developed and circulated a Request for Proposals – Community Engagement/Outreach and Preliminary Design.

- Held Bidders Conference – January 15, 2013
- Received proposals – 7 firms – February 1, 2013
- Held Oral Board – March 6, 2013 – Interviewed 5 firms
- Selected Biggs Cardosa Associates (BCA)

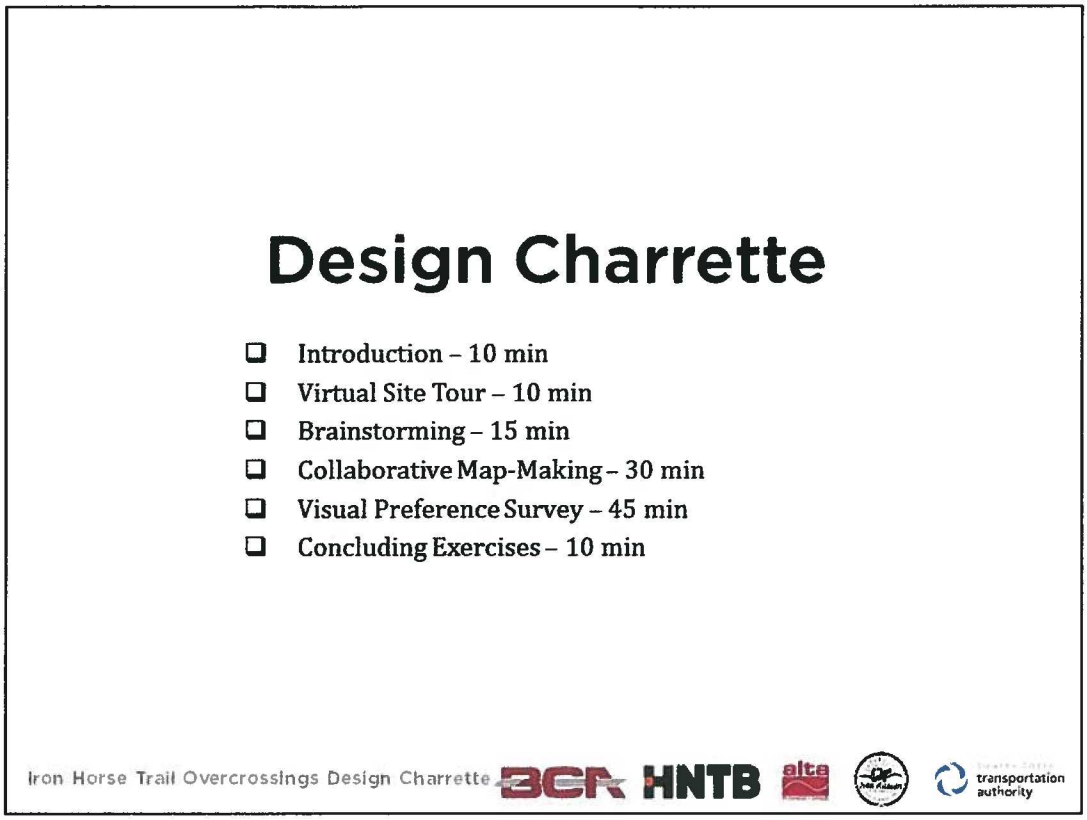
Iron Horse Trail Overcrossings Design Charrette BCA HNTB alta transportation authority

Introduction

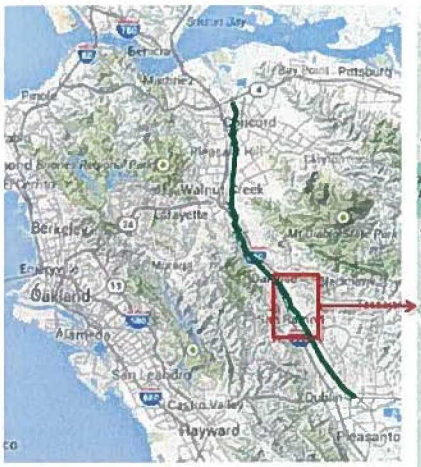
What is a Charrette?

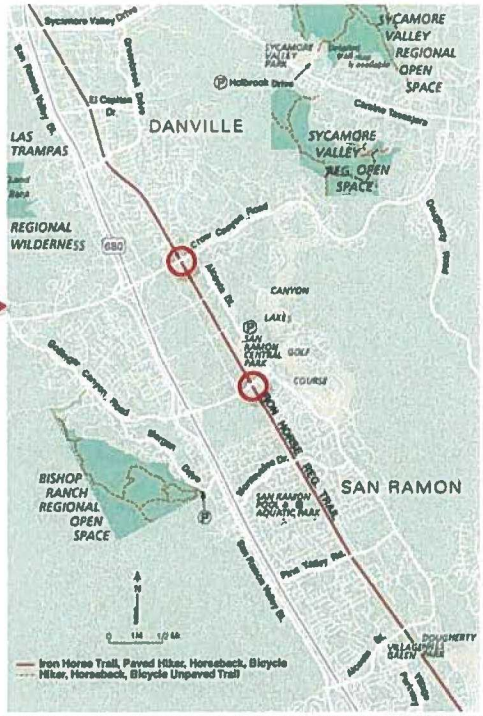
A charrette is a collaborative planning event that harnesses the talents and energies of all affected parties to create and support a feasible plan that represents transformative community change.

-The National Charrette Institute


Design Charrette
Introduction – 10 min
Virtual Site Tour – 10 min
Brainstorming – 15 min
Collaborative Map-Making – 30 min
Visual Preference Survey – 45 min
Concluding Exercises – 10 min
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority

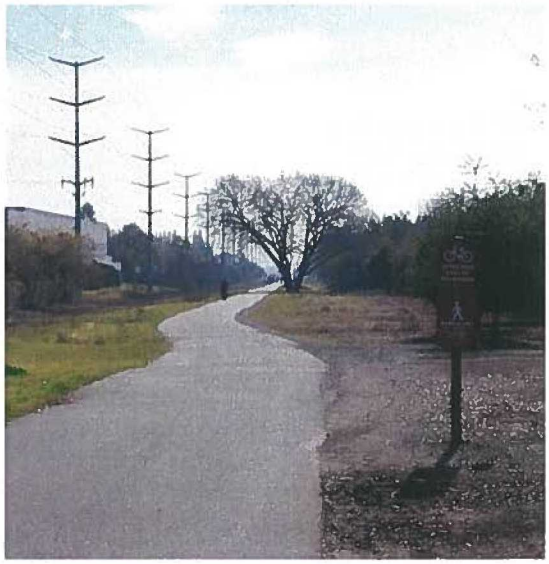

Virtual Site Tour
Overview of project location and existing trail
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority





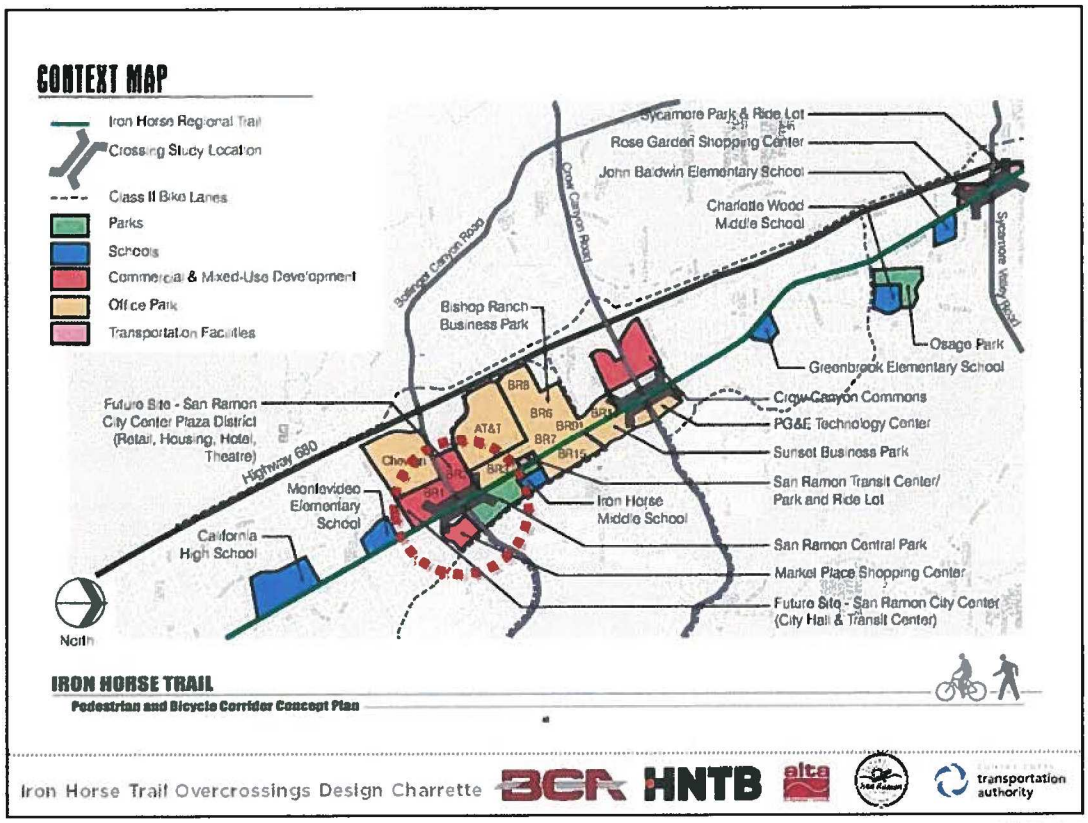
Iron Horse Trail

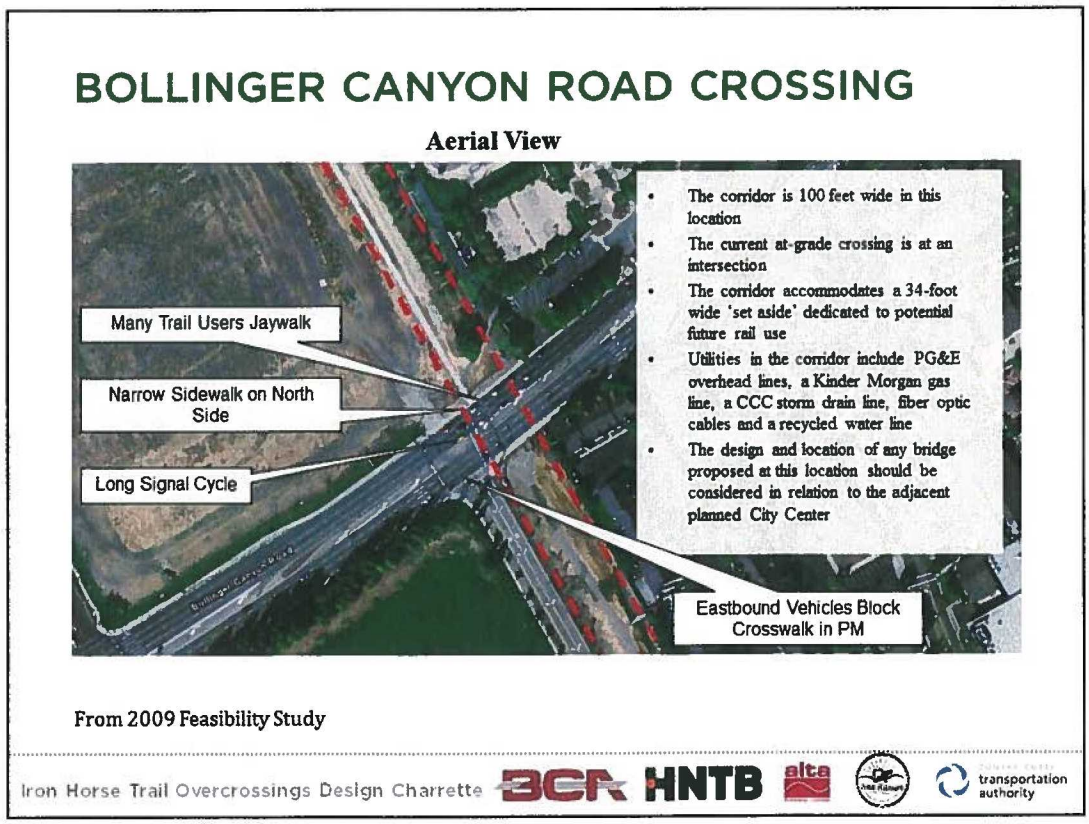
- Paved, multi-use trail from Concord to Dublin
- Follows the Southern Pacific Railroad San Ramon branch right-of-way



History of the Iron Horse Trail

- Southern Pacific Railroad's San Ramon Valley Branch Line, built early 1890s
- Southern Pacific abandoned the line in 1978
- Contra Costa County purchased the right-of-way during 1983-1989
- Corridor is now managed by Contra Costa County Public Works, East Bay Regional Park District, and the Contra Costa County Redevelopment Agency


CONTEXT MAP
Iron Horse Regional Trail
Crossing Study Location
Class II Bike Lanes
Parks
Schools
Commercial & Mixed-Use Development
Office Park
Transportation Facilities
Sycamore Park & Ride Lot
Rose Garden Shopping Center
John Baldwin Elementary School
Charlotte Wood Middle School
Bollinger Canyon Road
Crow Canyon Road
Sycamore Valley Road
Bishop Ranch Business Park
Osage Park
Greenbrook Elementary School
Future Site - San Ramon City Center Plaza District (Retail, Housing, Hotel, Theatre)
Crow Canyon Commons
PG&E Technology Center
Sunset Business Park
San Ramon Transit Center/ Park and Ride Lot
Highway 680
Montevideo Elementary School
Iron Horse Middle School
California High School
San Ramon Central Park
Market Place Shopping Center
Future Site - San Ramon City Center (City Hall & Transit Center)
North
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority


BOLLINGER CANYON ROAD CROSSING
Aerial View
Many Trail Users Jaywalk
Narrow Sidewalk on North Side
Long Signal Cycle
Eastbound Vehicles Block Crosswalk in PM
The corridor is 100 feet wide in this location
The current at-grade crossing is at an intersection
The corridor accommodates a 34-foot wide 'set aside' dedicated to potential future rail use
Utilities in the corridor include PG&E overhead lines, a Kinder Morgan gas line, a CCC storm drain line, fiber optic cables and a recycled water line
The design and location of any bridge proposed at this location should be considered in relation to the adjacent planned City Center
From 2009 Feasibility Study
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority

BOLLINGER CANYON ROAD CROSSING

View north across Bollinger Canyon Rd

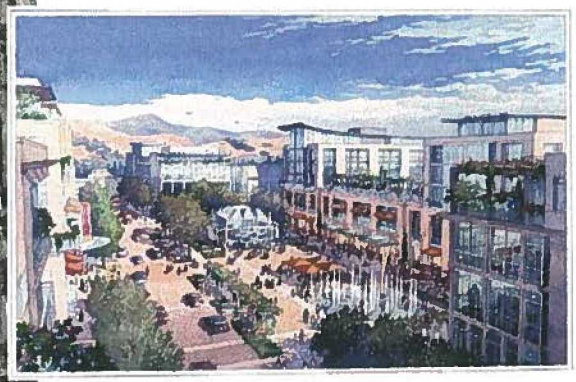
View east along Bollinger Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

BOLLINGER CANYON ROAD CROSSING

Views south across Bollinger Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

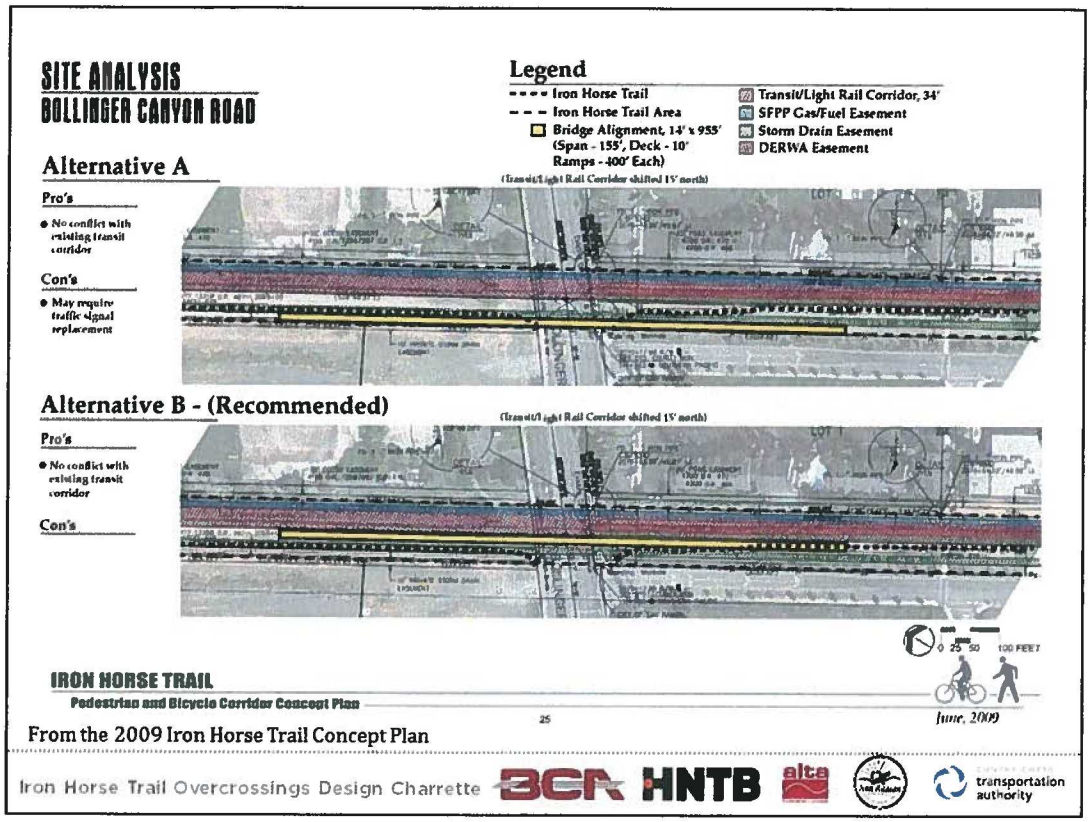


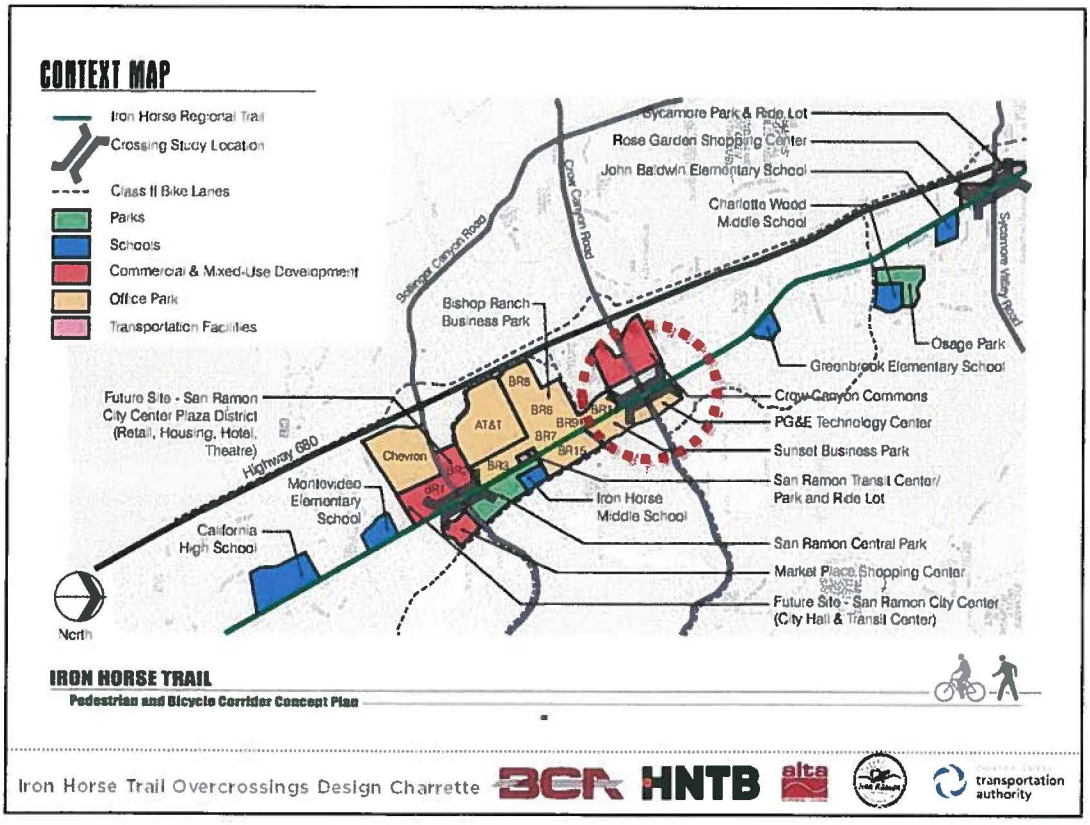
San Ramon City Center – as approved in 2007

Iron Horse Trail Overcrossings Design Charrette

City Hall

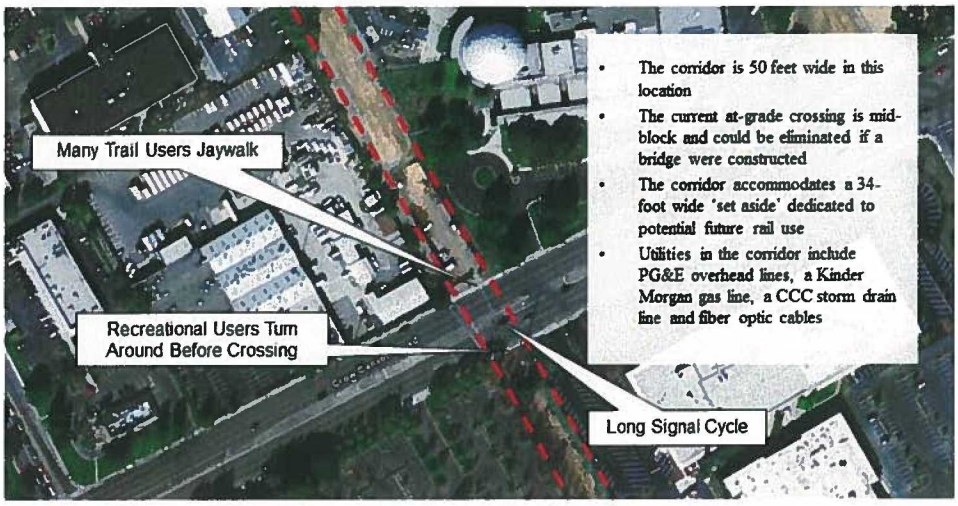
Iron Horse Trail Overcrossings Design Charrette


SITE ANALYSIS
BOLLINGER CANYON ROAD
Legend
Iron Horse Trail
Iron Horse Trail Area
Bridge Alignment, 14' x 955' (Span - 155', Deck - 10' Ramps - 400' Each)
Transit/Light Rail Corridor, 34'
SFPP Gas/Fuel Easement
Storm Drain Easement
DERWA Easement
Alternative A
Pro's
No conflict with existing transit corridor
Con's
May require traffic signal replacement
(Transit/Light Rail Corridor shifted 15' north)
Alternative B - (Recommended)
Pro's
No conflict with existing transit corridor
Con's
(Transit/Light Rail Corridor shifted 15' north)
0 25 50 100 FEET
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
25
June, 2009
From the 2009 Iron Horse Trail Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority


CONTEXT MAP
Iron Horse Regional Trail
Crossing Study Location
Class II Bike Lanes
Parks
Schools
Commercial & Mixed-Use Development
Office Park
Transportation Facilities
Sycamore Park & Ride Lot
Rose Garden Shopping Center
John Baldwin Elementary School
Charlotte Wood Middle School
Crow Canyon Road
Bollinger Canyon Road
Sycamore Valley Road
Bishop Ranch Business Park
Osage Park
Greenbrook Elementary School
Crow Canyon Commons
PG&E Technology Center
Sunset Business Park
San Ramon Transit Center/ Park and Ride Lot
Iron Horse Middle School
San Ramon Central Park
Market Place Shopping Center
Future Site - San Ramon City Center (City Hall & Transit Center)
Future Site - San Ramon City Center Plaza District (Retail, Housing, Hotel, Theatre)
Highway 680
AT&T
Chevron
Montevideo Elementary School
California High School
North
IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority

CROW CANYON ROAD CROSSING

Aerial View



Iron Horse Trail Overcrossings Design Charrette

CROW CANYON ROAD CROSSING

Views north approaching Crow Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

CROW CANYON ROAD CROSSING

Views south approaching Crow Canyon Rd

Iron Horse Trail Overcrossings Design Charrette

SITE ANALYSIS
CROW CANYON ROAD

Legend

- Iron Horse Trail
- Iron Horse Trail Area
- Bridge Alignment, 14' x 930' (Span - 130', Deck - 10' Ramps - 400' Each) (Transit/Light Rail Corridor shifted 10' north)
- Transit/Light Rail Corridor, 34'
- SFPP Gas/Fuel Easement
- Storm Drain Easement

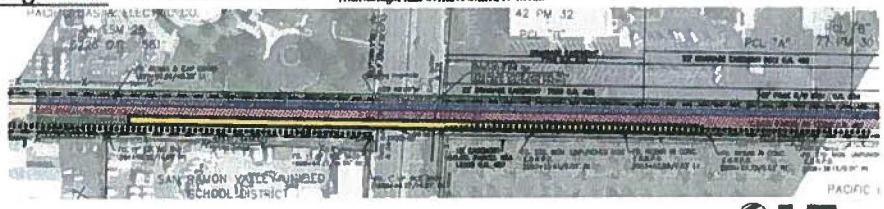
Proposed Alignment - (Recommended)

Pro's

- No conflict with existing transit corridor
- No trail realignment

Con's

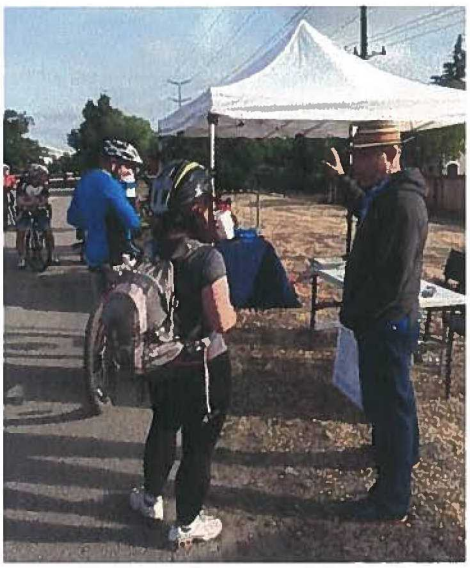
- Conflicts with Storm Drain Easement

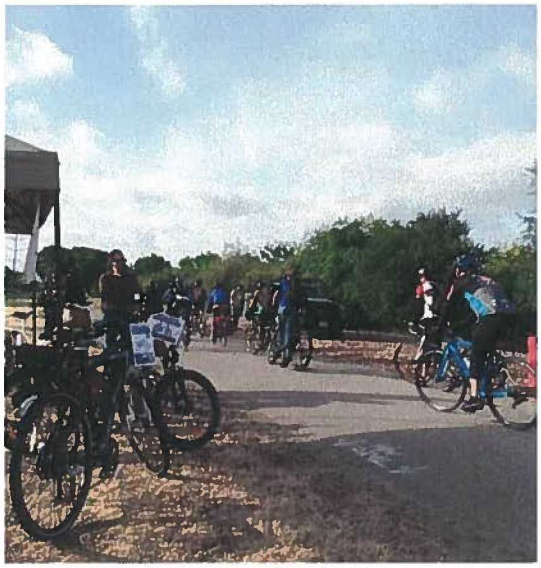


IRON HORSE TRAIL
Pedestrian and Bicycle Corridor Concept Plan
23
June 2009

From the 2009 Iron Horse Trail Concept Plan

Iron Horse Trail Overcrossings Design Charrette





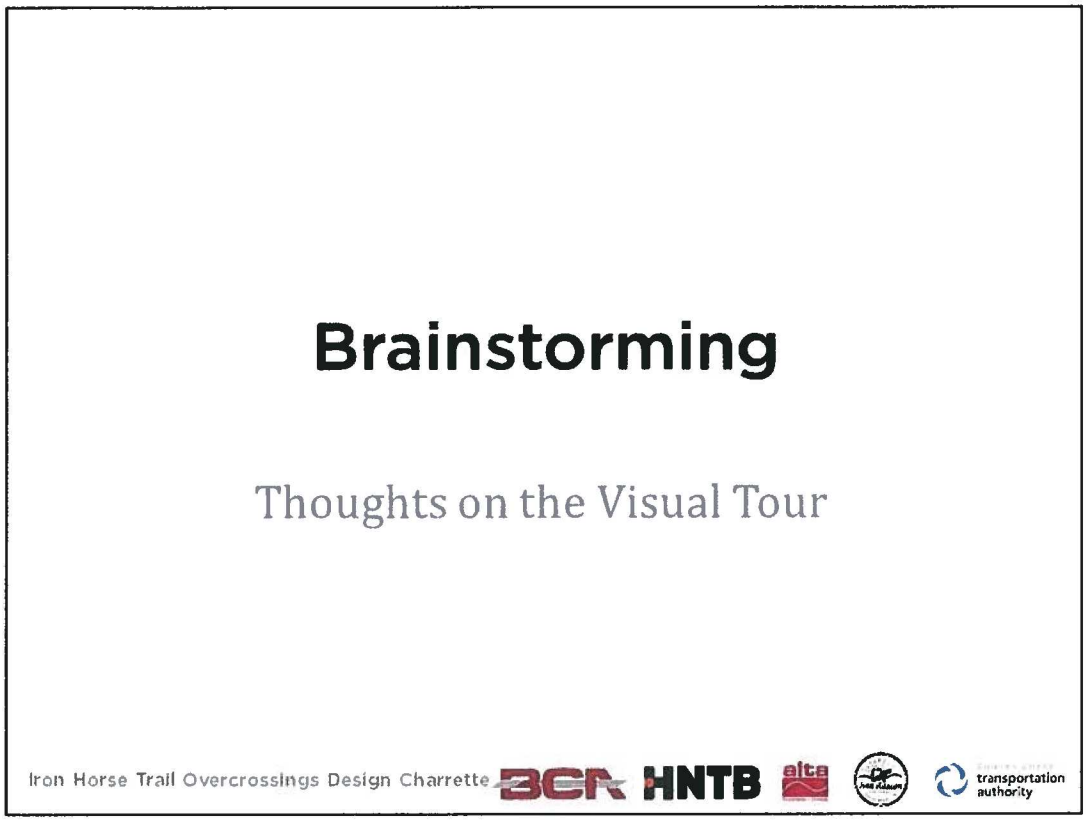
Bike to Work Day

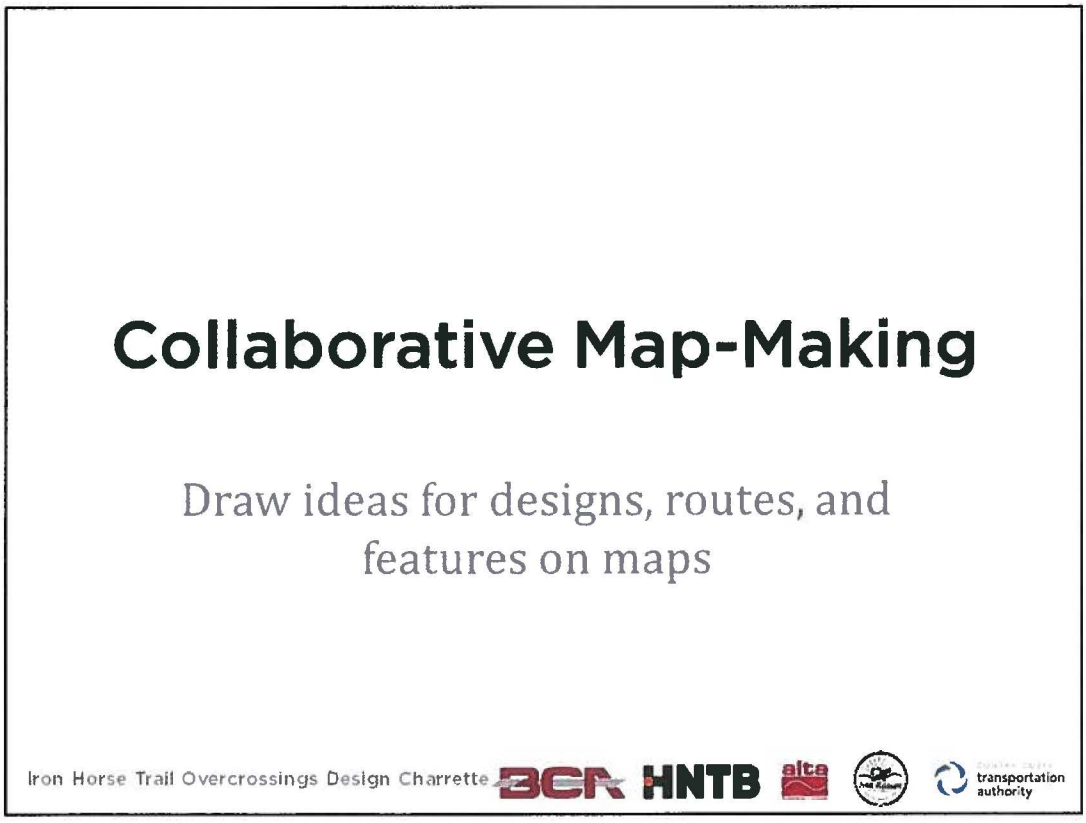
Iron Horse Trail Overcrossings Design Charrette

Charrette Schedule

- ✓ Introduction
- ✓ Virtual Site Tour
- ❑ Brainstorming
- ❑ Collaborative Map-Making
- ❑ Visual Preference Survey
- ❑ Concluding Exercises

Iron Horse Trail Overcrossings Design Charrette


Brainstorming
Thoughts on the Visual Tour
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority


Collaborative Map-Making
Draw ideas for designs, routes, and features on maps
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority

Visual Preference Survey

Rank each of the following bridges
on a scale of 1 (worst) to 5 (best)
for Design, Materials, and Color.

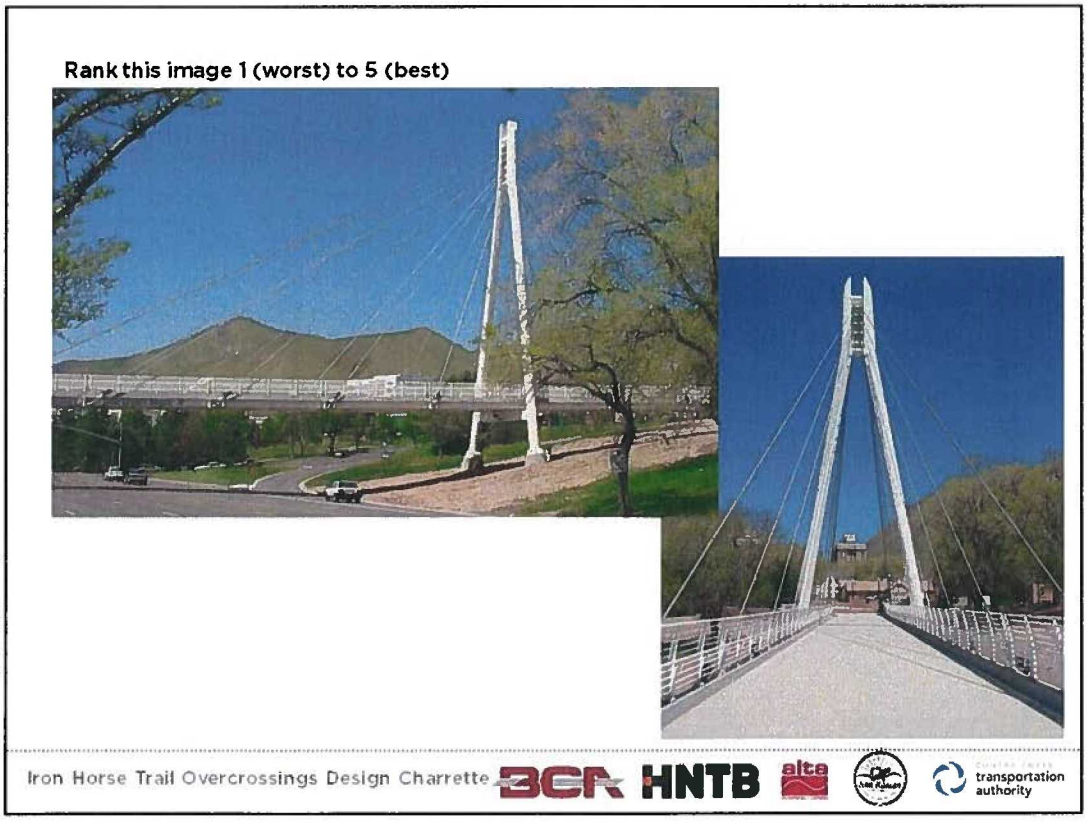
Think about how each fits (or doesn't fit) with
your vision for the community.

Iron Horse Trail Overcrossings Design Charrette

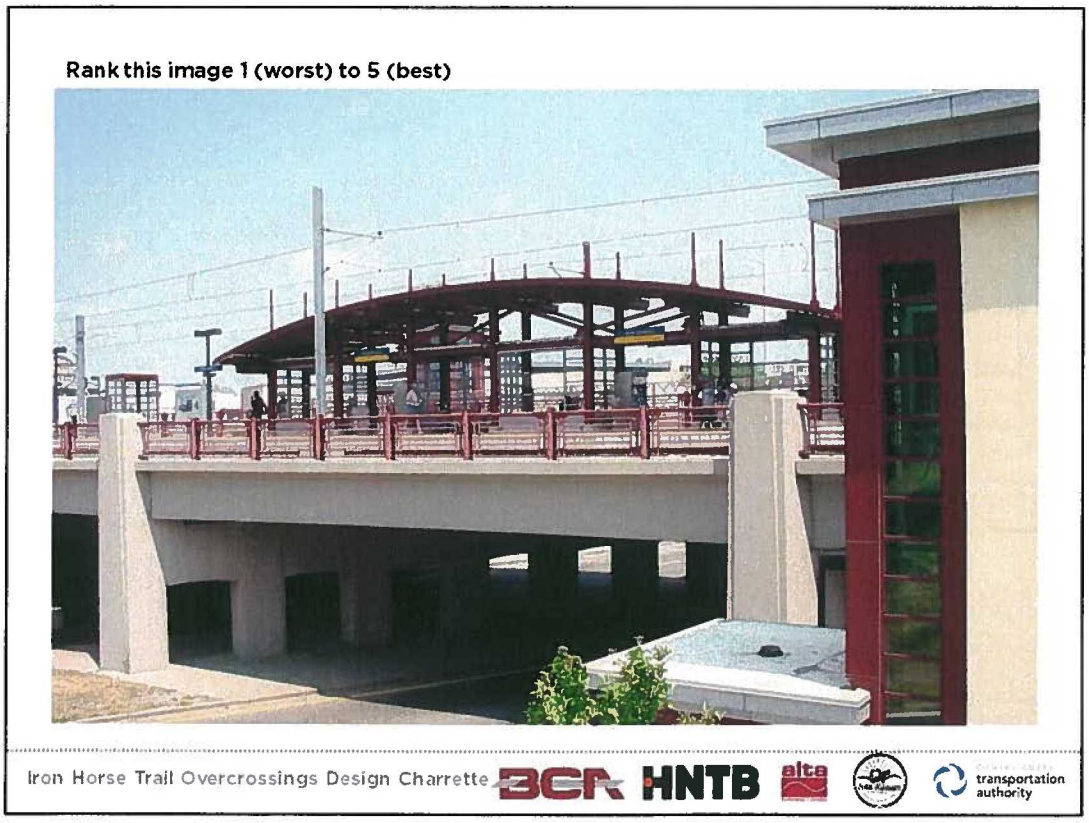
Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

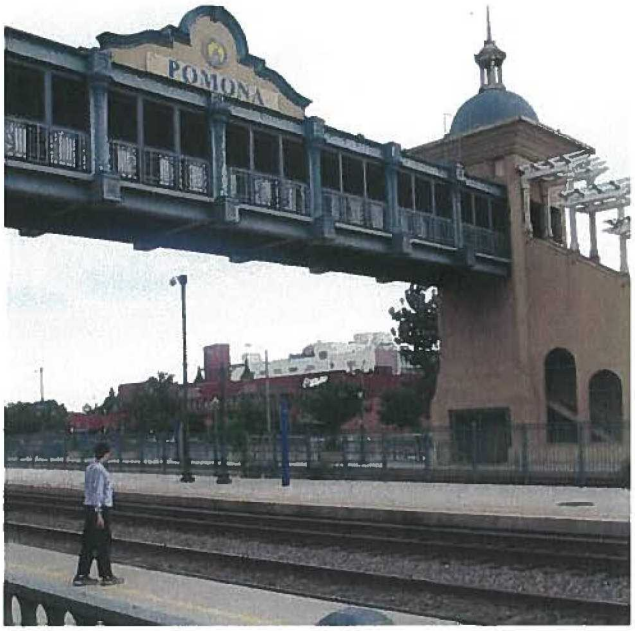

Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
3CR
HNTB
alta
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
3CR
HNTB
alta
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCA
HNTB
alta
transportation authority

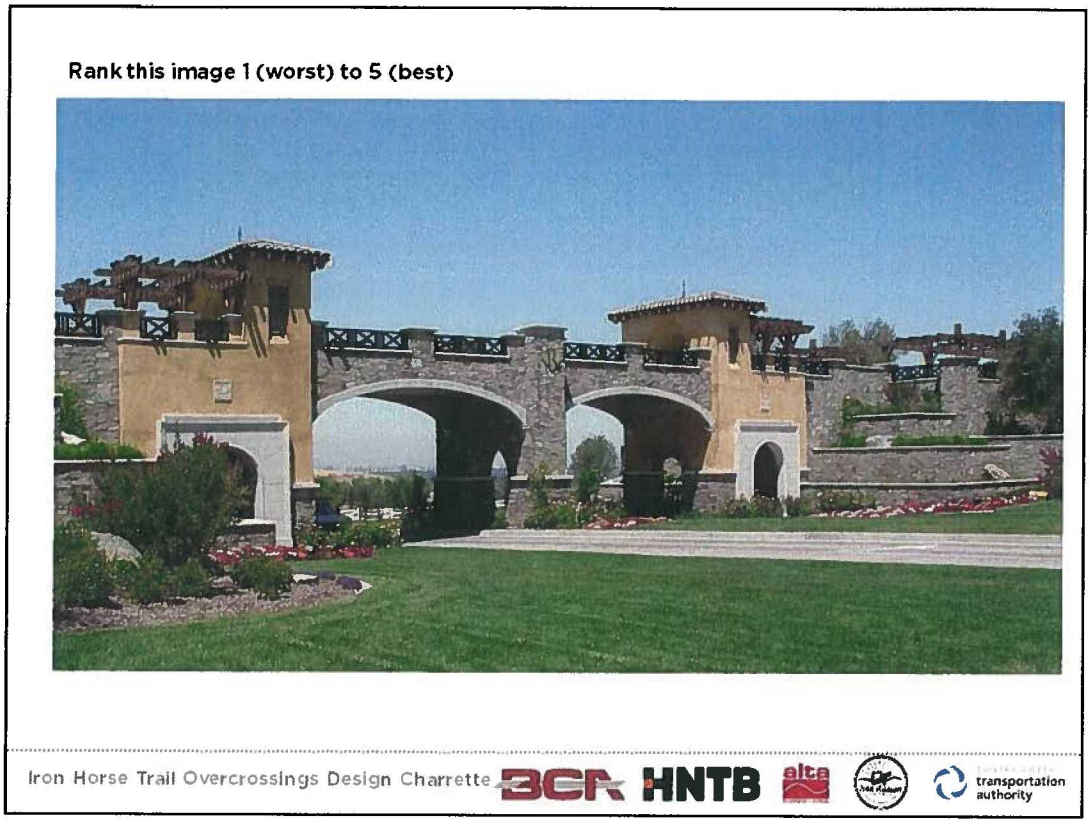
Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

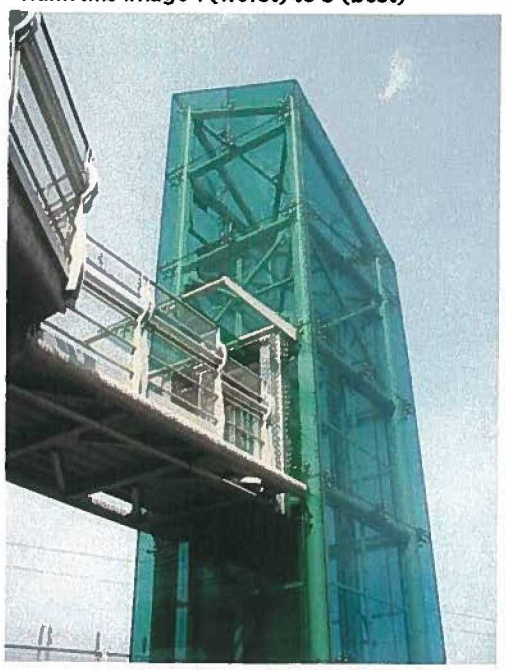
Rank this image 1 (worst) to 5 (best)

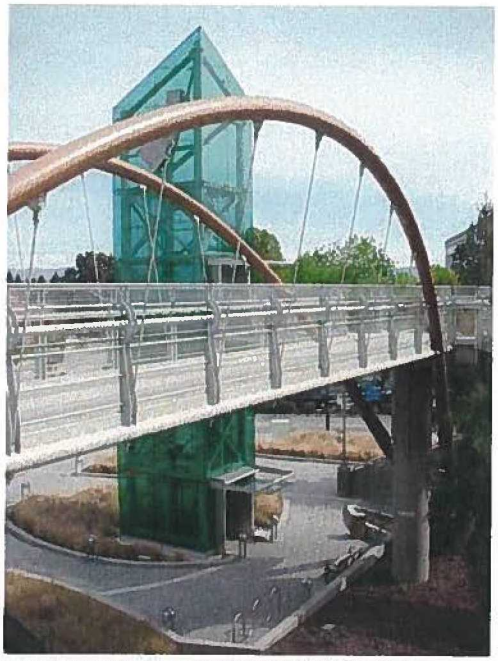
Iron Horse Trail Overcrossings Design Charrette


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority


Rank this image 1 (worst) to 5 (best)
Iron Horse Trail Overcrossings Design Charrette
BCR
HNTB
alta
transportation authority

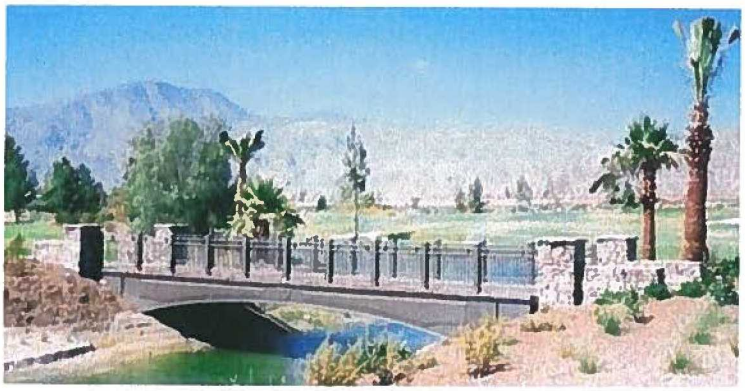
Rank this image 1 (worst) to 5 (best)





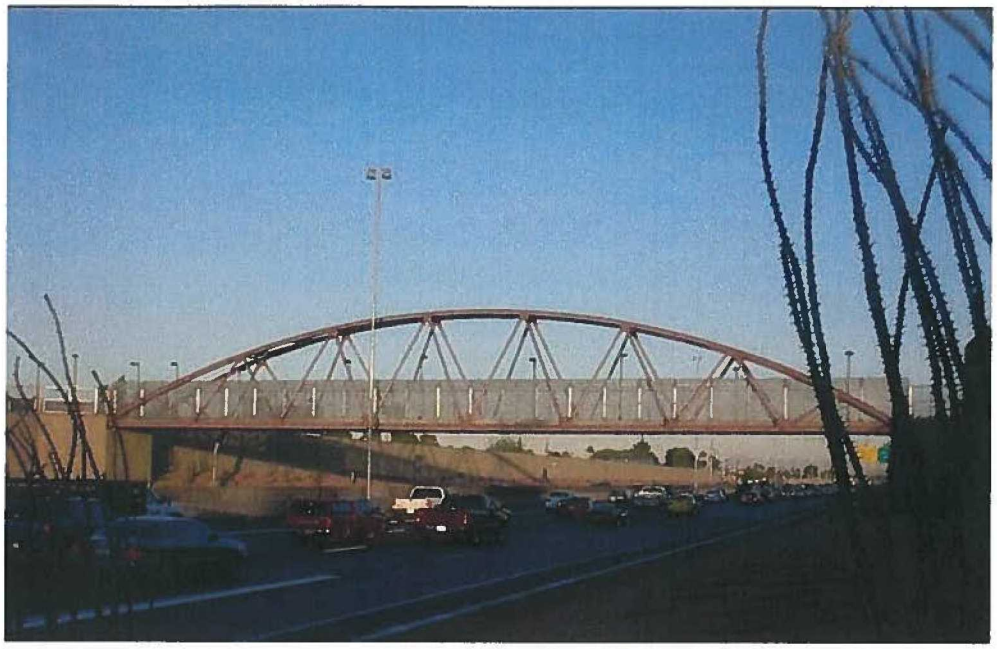
Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

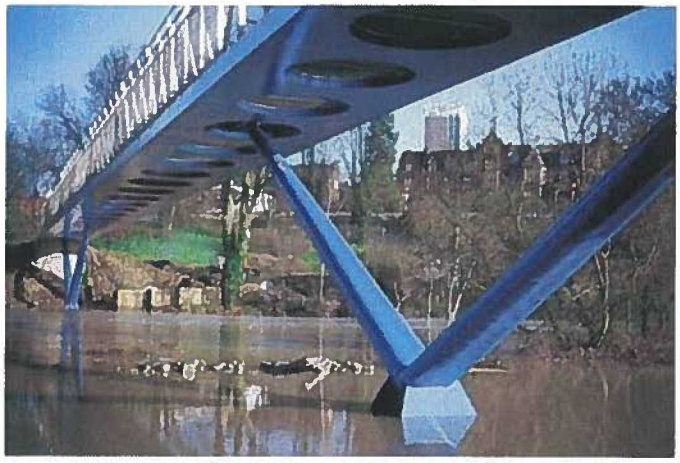


Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

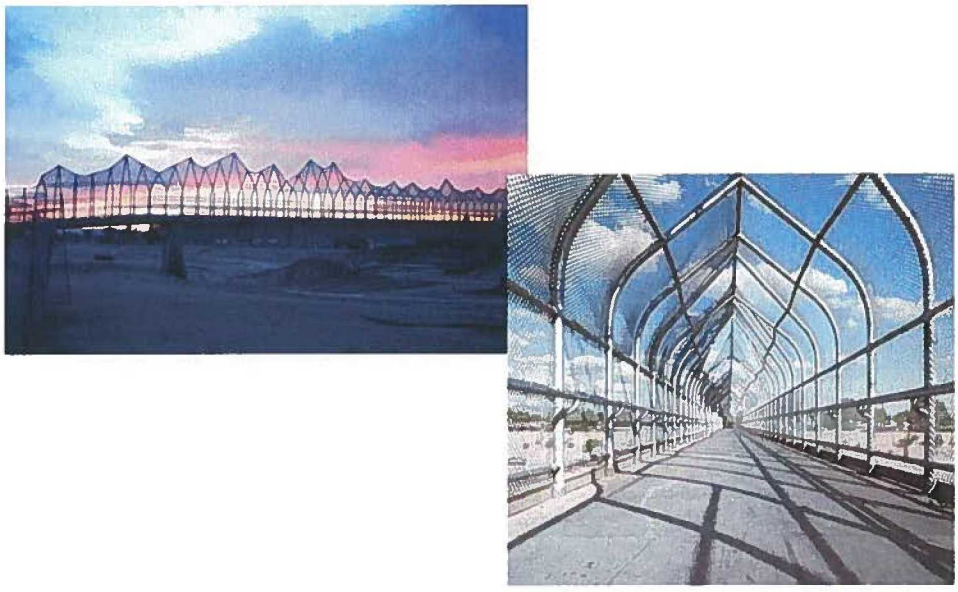


Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

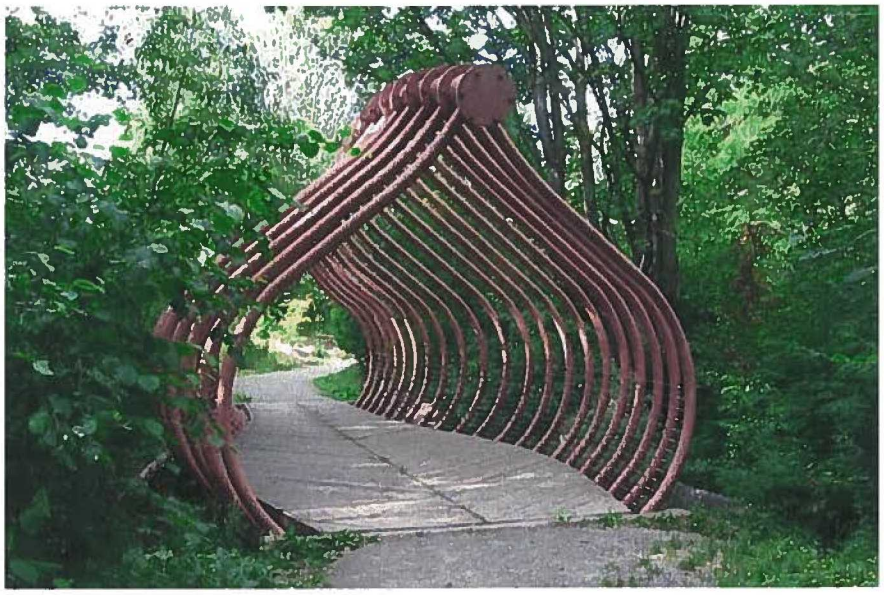
Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)



Iron Horse Trail Overcrossings Design Charrette

Rank this image 1 (worst) to 5 (best)

Iron Horse Trail Overcrossings Design Charrette

Appendix B: Marked-up Maps

Figure 1: Bollinger Canyon Road Map from May 20 Charrette

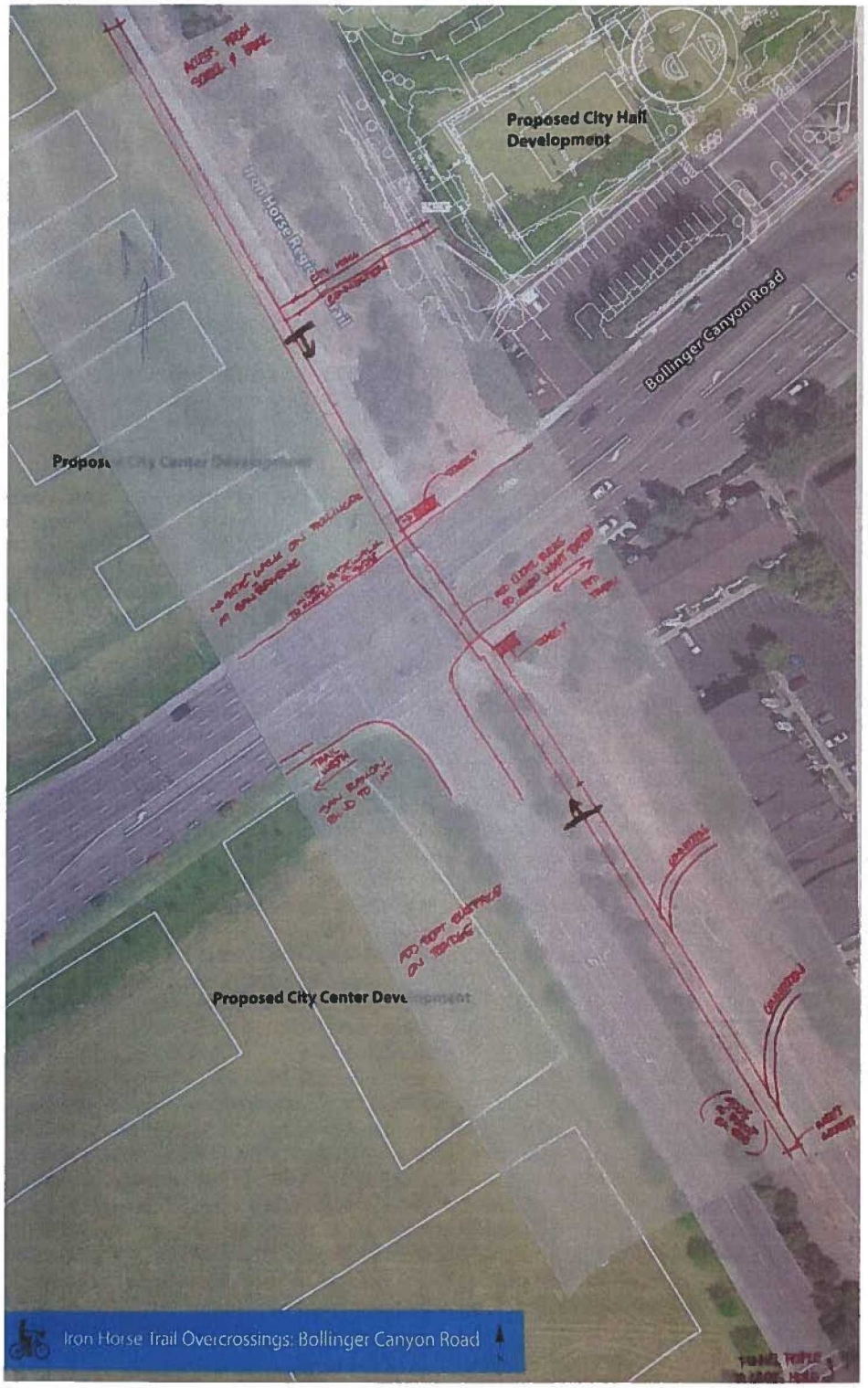
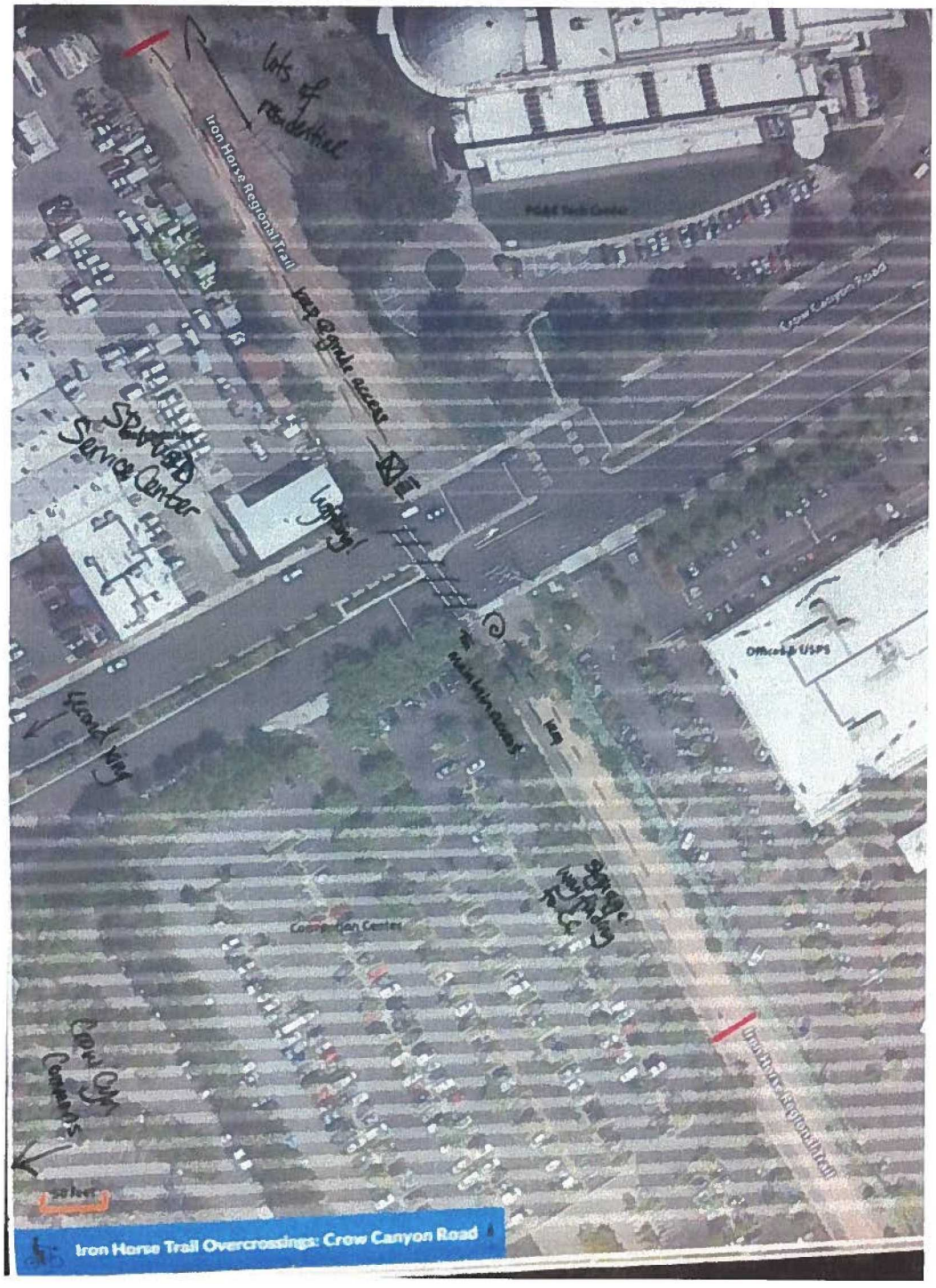


Figure 2: Crow Canyon Road Map from May 20 Charrette

Figure 3: Bollinger Canyon Road Map from June 9 Charrette

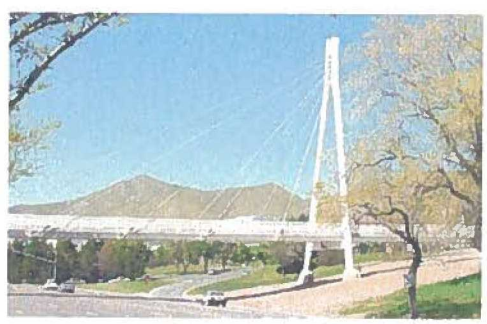
Figure 4: Crow Canyon Road Map from June 9 Charrette



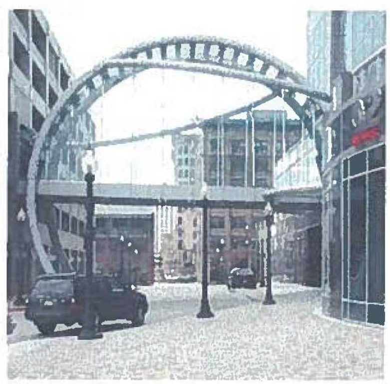
Appendix C: Visual Preference Survey Form

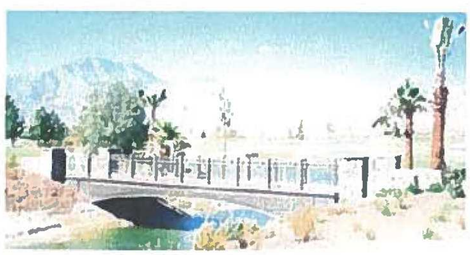
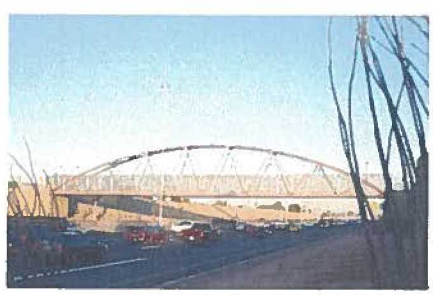
Included on the following pages.

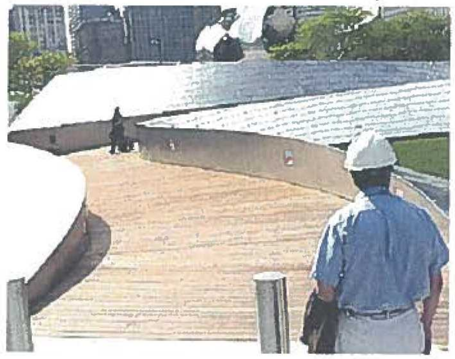
San Ramon Valley Iron Horse Trail – Design Charrette – Visual Preference Survey

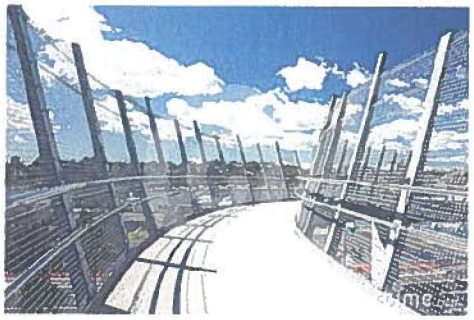
Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

alta 3CR HNTB San Ramon Contra Costa transportation authority

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

Bollinger Canyon Overcrossing	Examples	Crow Canyon Overcrossing
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:
Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:		Design 1 2 3 4 5 Materials 1 2 3 4 5 Color 1 2 3 4 5 Comments:

San Ramon Iron Horse Trail Overcrossings Project

Frequently Asked Questions

1. What is the purpose of the Project?
   - 1a. To improve safety by eliminating conflicts between pedestrians/bicycles and vehicles;
   - 1b. Improve vehicular traffic flow by removing the at-grade crossings;
   - 1c. Reduce/eliminate jaywalking;
   - 1d. Enhance safety by providing an environment that encourages pedestrian and bicycle usage along the Iron Horse Trail; and
   - 1e. Increase trail use by nearby schools by improving safety at the Bollinger Canyon Road and Crow Canyon Road crossings.

2. What is the Project Schedule?
   - 2a. The Project consists of four phases:
     1. Phase One – Feasibility Study – Completed in 2009;
     2. Phase Two – Community Outreach and Preliminary Design – Currently underway and is expected to be completed in 2015;
     3. Phase Three – Environmental and Final Design – Anticipated to commence in 2015 but is highly dependent on grant funding; and
     4. Phase Four – Construction – Highly dependent on grant funding. When funding is available, could begin as early as 2017.

3. How much will construction cost?
   - 3a. Final costs have not yet been identified because the bridge type has not been selected. The Feasibility Study, completed in 2009, estimates construction costs ranged from $6M to $9M per overcrossing. A detailed preliminary cost estimate will be developed during the preliminary design phase. The costs are highly dependent on the type of bridge structure chosen.

4. Where is the money coming from?
   - 4a. For construction phase, the final sources of funding have not yet been identified. The City will apply for various grants and anticipates that the overcrossing(s) will be constructed with a combination of grant funding, including local grants (Measure J, Transportation for Livable Communities), State (Active Transportation Program), and Federal Tiger Grant will likely be submitted.

5. How will this project benefit me as a driver?
   - 5a. Less traffic signal delays translating to improvement in traffic circulation on Bollinger Canyon Road and Crow Canyon Road.

6. How will this project benefit me as a trail user?
    6a. The proposed overcrossings will separate vehicles from pedestrian and bicycles thereby providing safer access to either side of the street and no delays at the crossings.

7. What will happen with the existing at-grade crossings?
    7a. To be determined in final design phase. At this point it is desired to remove the at-grade crossings to eliminate conflicts between Bicycle/Pedestrian/Vehicles.

8. Who will make the final decision for the bridge architecture/type of overcrossings?
    8a. San Ramon City Council will have the final decision of the bridge architecture/type; however it will require consensus from East Bay Regional Park District (EBRPD) and Contra Costa County (CCC).

9. How many opportunities will residents have to comment/feedback?
    9a. There are 2 Design Charettes/Community Workshops (May 20 and June 9);
    9b. San Ramon Open Government Survey – On Line Survey – Fall 2014;
    9c. Survey at San Ramon Farmers Market – Fall 2014;
    9d. San Ramon City Committee Presentations (open to the public) – Fall 2014/Winter 2015;
    9e. San Ramon Stakeholder meetings – Fall 2014/Winter 2015; and
    9f. San Ramon City Council meetings (open to the public) – Fall 2014/Winter 2015 and Summer 2015.

10. Who should we contact for more information?
    - Lisa Bobadilla, San Ramon Transportation Division Manager
        i. 925-973-2651
        ii. lbobadilla@sanramon.ca.gov
    - Brian Bornstein, San Ramon City Engineer
        i. 925-973-2685
        ii. bbornstein@sanramon.ca.gov
    - Theresa Peterson, San Ramon Associate Engineer
        i. 925-973-2685
        ii. tpeterson@sanramon.ca.gov
    - Carrie Ricci, Iron Horse Trail Manager, Contra Costa County Public Works
        i. 925-313-2235
        ii. cricc@pw.cccounty.us
    - Jim Townsend, Trails Manager, East Bay Regional Park District
        i. 510-544-2602
        ii. jtownsend@ebparks.org

IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

San Ramon

City Council

October 28, 2014

San Ramon Iron Horse Trail Bike/Ped Overcrossing

- Purpose
  1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
  2. Improve motor vehicle circulation by removing the at-grade crossings;
  3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
  4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Trail; and
  5. Increase trail usage by improving the comfort at the Bollinger Canyon and Crow Canyon Road crossings.

Background

Phase One

San Ramon Valley Iron Horse Trail Corridor
Concept Plan – Completed 2009

Phase Two

Community Engagement/Outreach and
Preliminary Design – In progress

(Collaborative effort between San Ramon, Contra Costa County, East Bay Regional Park District)

Corridor Concept Plan Findings

- Evaluated the feasibility of constructing bike/Ped overcrossings to improve access and safety for bicyclists and pedestrians along the Iron Horse Trail and to create a bike/pedestrian-friendly environment at Sycamore Valley, Crow Canyon & Bollinger Canyon Roads

- Developed concepts, evaluated the feasibility, identified costs and future funding sources

HOW IS THE PROJECT FUNDED?

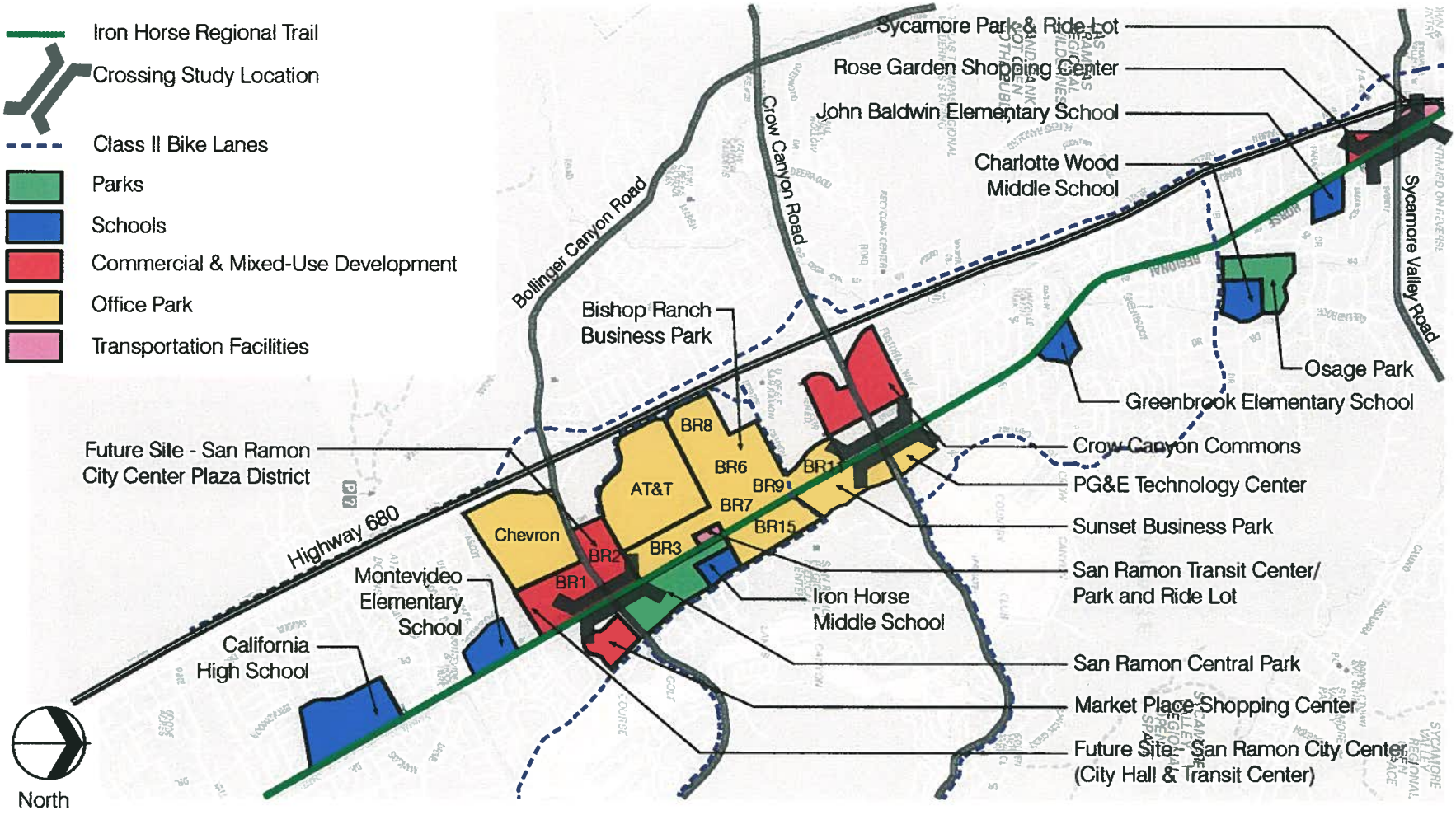
- Phase One - Contra Costa Transportation Authority (CCTA) approved the allocation of Transportation Planning and Land Use funds (T-PLUS) to implement the SRV Corridor Concept Plan - Study completed in 2009

- Phase Two - The CCTA approved the allocation of Measure J Transportation for Livable Communities (TLC) funds issued in 2012
  - Initiated Community Engagement/Outreach and Preliminary Design

WHO IS INVOLVED?

- City of San Ramon
  - Transportation/Engineering
- Contra Costa County
- Contra Costa Transportation Authority
- East Bay Regional Park District
- Consultant Team
    - Biggs Cardosa Associates
      - Alta Planning
      - HNTB

PROJECT SITE AND CONTEXT – PHASE ONE

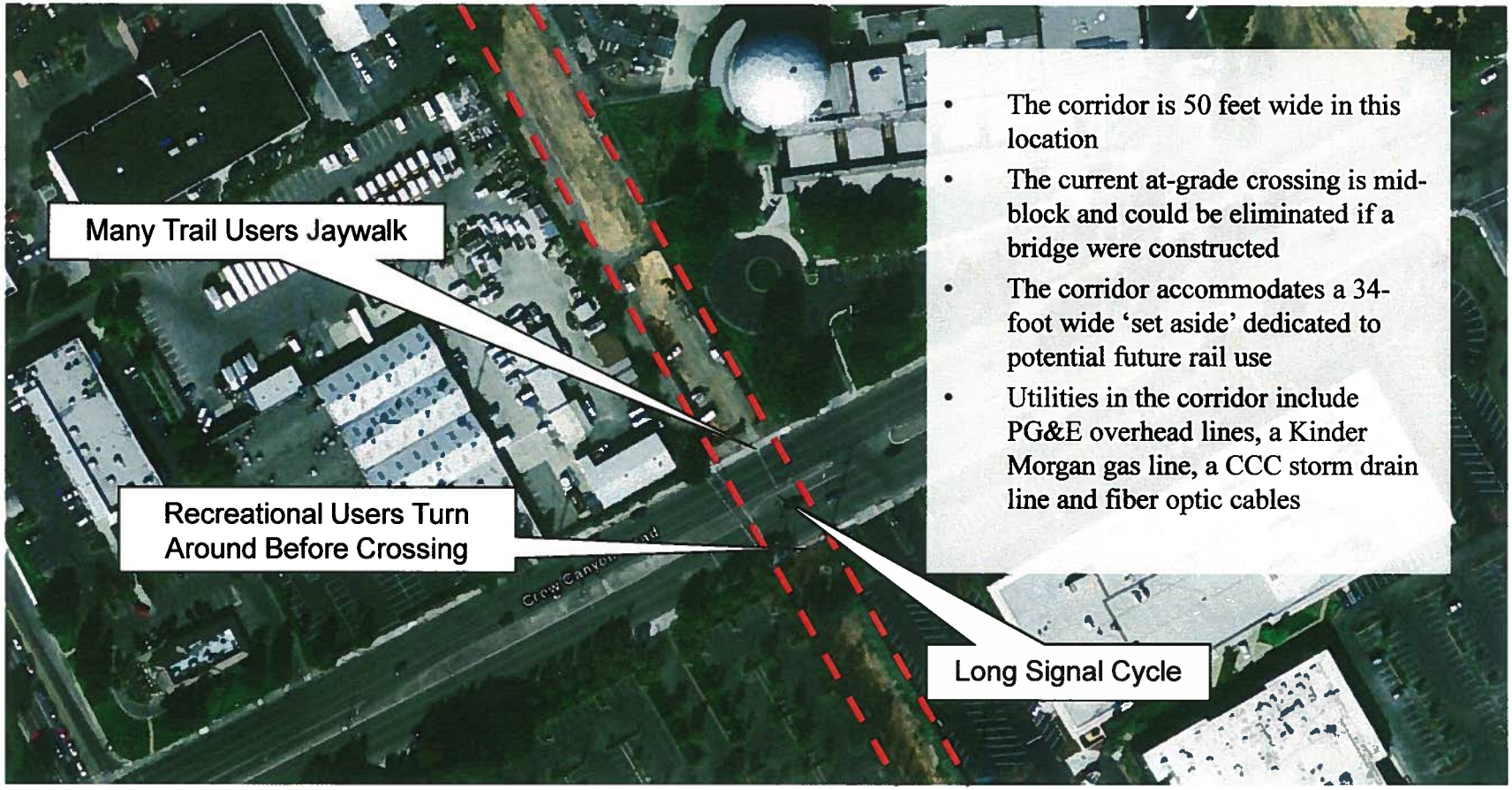


IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

CROW CANYON ROAD CROSSING

Aerial View



- The corridor is 50 feet wide in this location
- The current at-grade crossing is mid-block and could be eliminated if a bridge were constructed
- The corridor accommodates a 34-foot wide 'set aside' dedicated to potential future rail use
- Utilities in the corridor include PG&E overhead lines, a Kinder Morgan gas line, a CCC storm drain line and fiber optic cables

CROW CANYON ROAD CROSSING


View North Across Crow Canyon Road

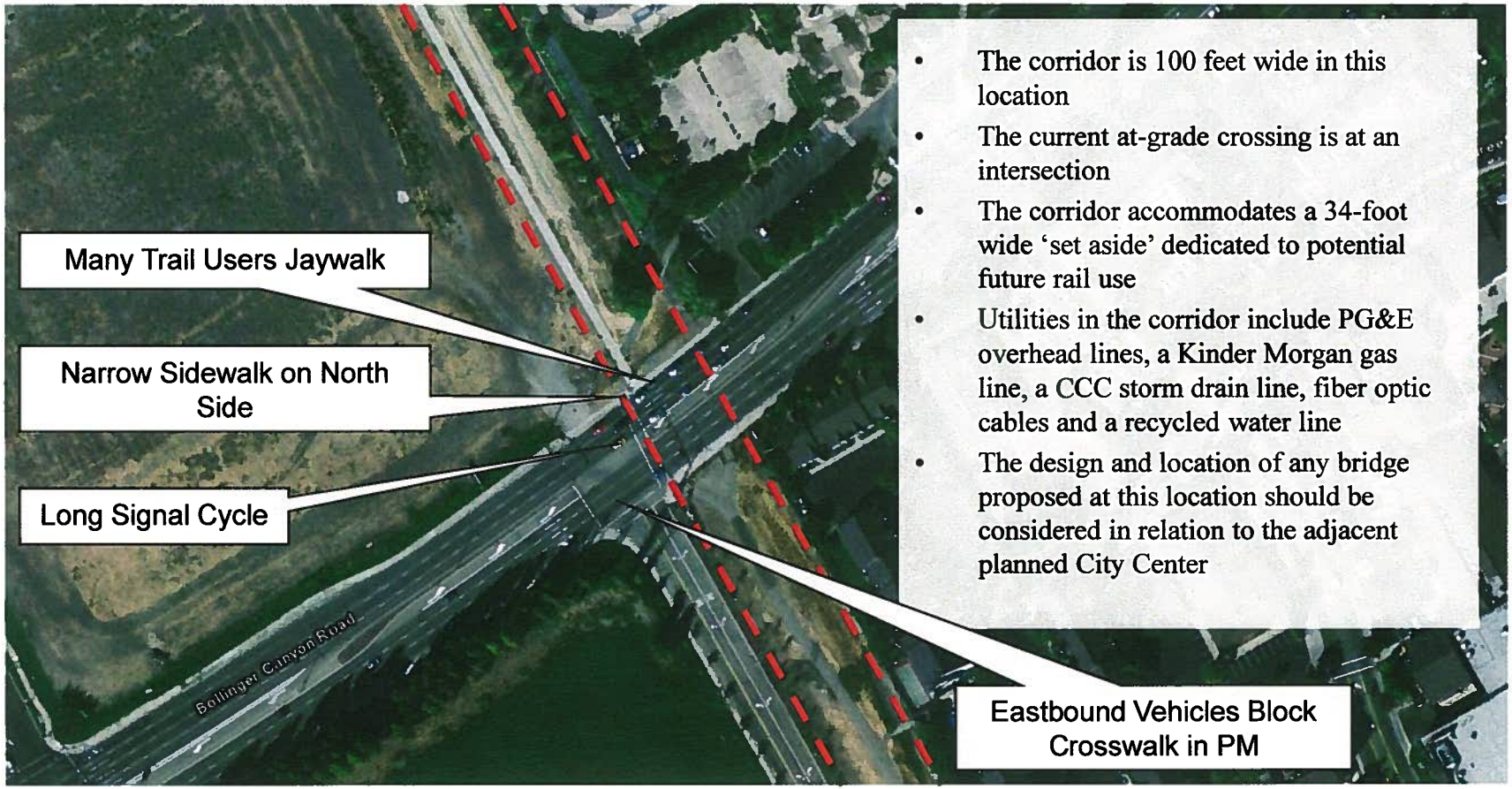

View South Across Crow Canyon Road

IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

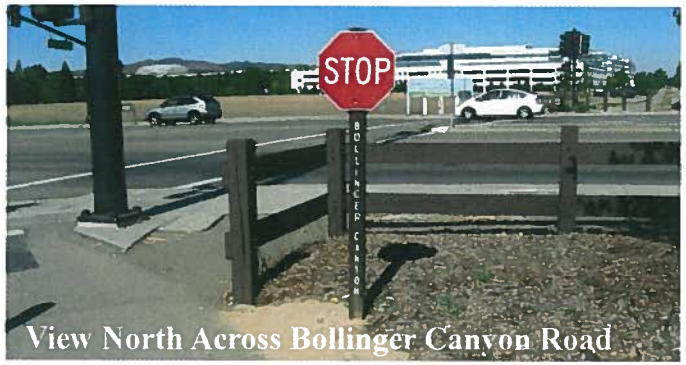
BOLLINGER CANYON ROAD CROSSING

Aerial View

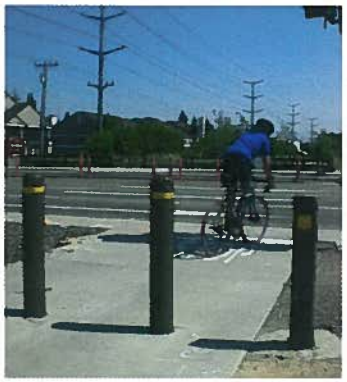


- The corridor is 100 feet wide in this location
- The current at-grade crossing is at an intersection
- The corridor accommodates a 34-foot wide 'set aside' dedicated to potential future rail use
- Utilities in the corridor include PG&E overhead lines, a Kinder Morgan gas line, a CCC storm drain line, fiber optic cables and a recycled water line
- The design and location of any bridge proposed at this location should be considered in relation to the adjacent planned City Center

BOLLINGER CANYON ROAD CROSSING



View North Across Bollinger Canyon Road




View South Along the Trail

IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

Project Status Update – Funding

Contra Costa Transportation Authority approved Measure J Transportation for Livable Communities (TLC) grant totaling $620,000

$200,700	Phase Two – In progress
$419,300	Phase Three – Environmental
$150,000	Priority Development Area (PDA) Grant Approved-October 2014

Phase II – Community Engagement/Outreach

1. Developed and Circulated a Request for Proposals – Community Engagement/Outreach and Preliminary Design – December 18, 2012

2. Held Bidders Conference – January 15, 2013

3. Received Proposals – 7 firms – February 1, 2013

4. Held Oral Board – March 6, 2013 - Interviewed 5 firms

5. Selected Biggs Cardosa Associates (BCA)

6. Contract Executed with Biggs Cardosa - November 12, 2013

Community Engagement/Outreach

- **Design Charrette**

  - A design charrette is a collaborative planning event that harnesses the talents and energies of all affected parties to create and support a feasible plan that represents transformative community change

  - Design Charrettes held May 20 and June 9, 2014 at the San Ramon Community Center

Community Engagement/Outreach

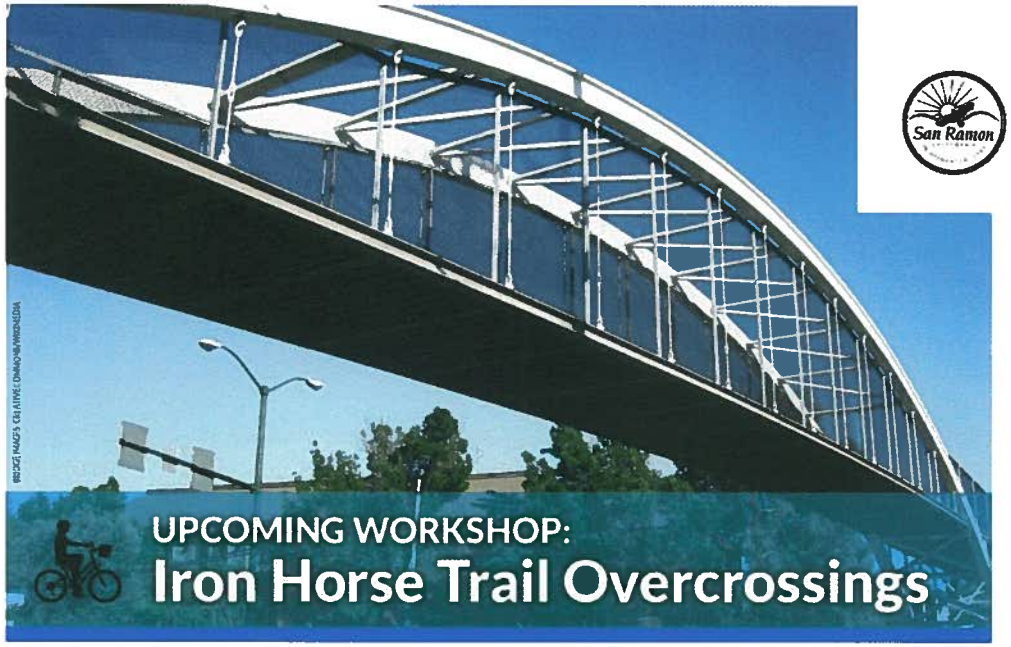
Bring Your Ideas!

The Iron Horse Trail Overcrossings Project is looking for new ideas for overcrossing designs for Bollinger Canyon and Crow Canyon Roads in San Ramon. These new bicycle and pedestrian overcrossings will help improve overall safety and reduce delay for trail users and roadway users alike. We want your input – come give us your ideas!

Activities will include:

- Brainstorming
- Collaborative Map-Making
- Virtual Site Tour
- Visual Preference Survey

The Ironhorse Trail Overcrossings Project is a collaborative effort between the City of San Ramon, Contra Costa County, and the East Bay Regional Park District (which owns and maintains the Iron Horse Trail), and this phase is funded by Measure J sales tax revenue approved by voters in 2004. This project phase follows a 2009 study that identified conceptual improvement options for these locations, and will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for final design, environmental approval, and construction of the overcrossings.



NOTE: This meeting is being held in a wheelchair-accessible location. To request accessibility accommodation(s) to participate in the meeting, please contact the City Clerk 24 hours in advance of the meeting at 925-973-2539.

IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

Community Engagement/Outreach

- Design Charrette Activities
  - Virtual Site Tour
  - Brainstorming
  - Collaborative Map Making
  - Visual Preference Survey

Community Engagement/Outreach

Activity Summary: Virtual Site Tour

- Reviewed locations, surroundings, and unique context of each overcrossing
- Identified constraints and opportunities to connect to destinations

Community Engagement/Outreach

Activity Summary: Brainstorming

- Participants support both crossings, felt Bollinger Canyon was the priority
- Want to preserve character of IHT
- Accommodate a variety of users: cyclists, joggers, mobility devices
- Create places to gather as a community

Community Engagement/Outreach

Activity Summary: Collaborative Mapmaking – Bollinger Canyon Road

- Keep and improve at-grade crossing
- Provide access to other destinations along the trail
- Protect views of hills
- Add vertical access to Bollinger Canyon Road from the overcrossing

Community Engagement/Outreach

Activity Summary: Collaborative Mapmaking – Crow Canyon Road

- Consider & protect wildlife, rustic character
- Add trees or other greenery to screen adjacent uses
- Eliminate at-grade crossing, but maintain access from trail to sidewalks

Community Engagement/Outreach

Activity Summary: Visual Preference Survey – Bollinger Canyon Road

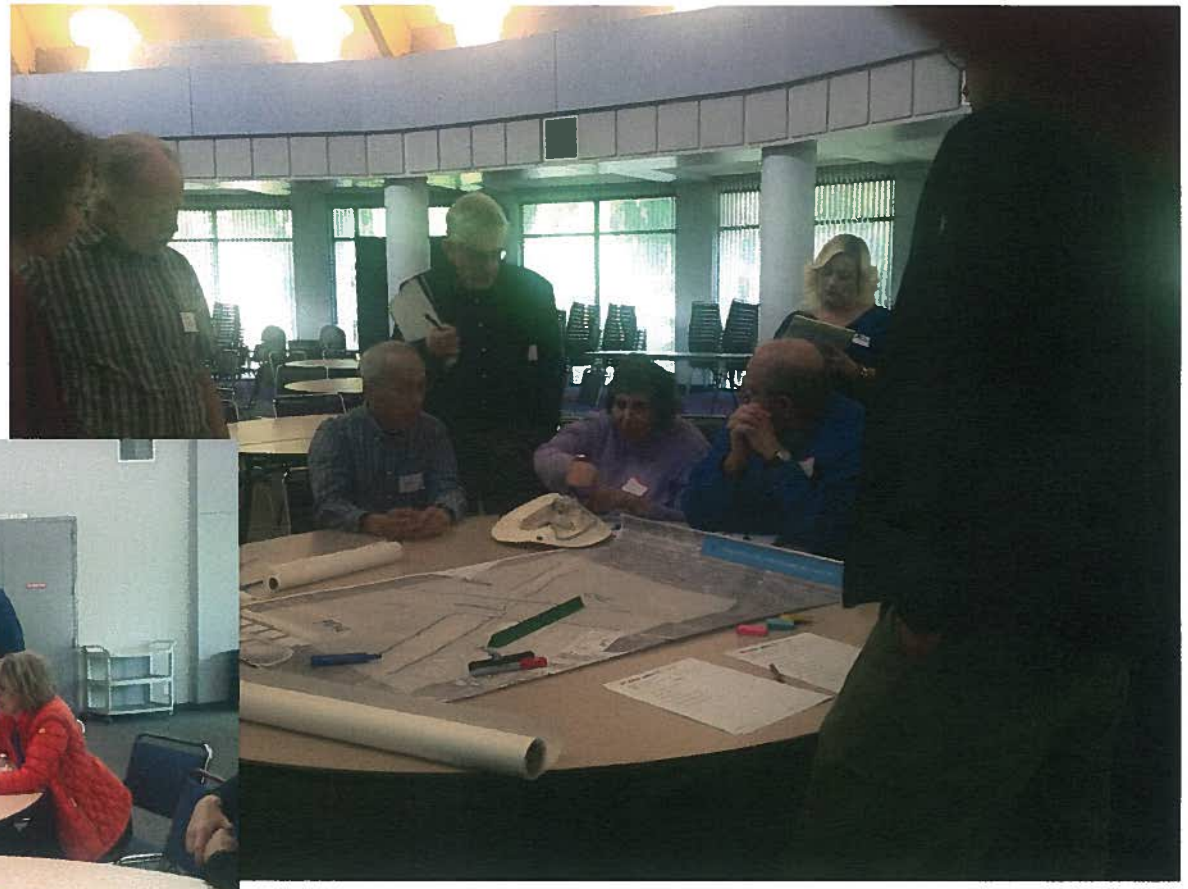
Sleek modern lines, open feel, tie in with planned city center. Incorporate blue; landscaped elements.

Community Engagement/Outreach

Activity Summary: Visual Preference Survey – Crow Canyon Road

Rustic, traditional design. Curving arches in neutral colors, no frills, wooden details.

Community Engagement/Outreach



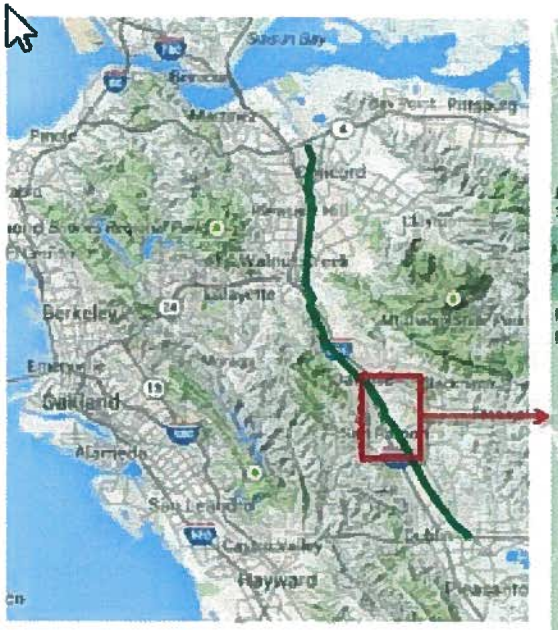
Community Engagement/Outreach

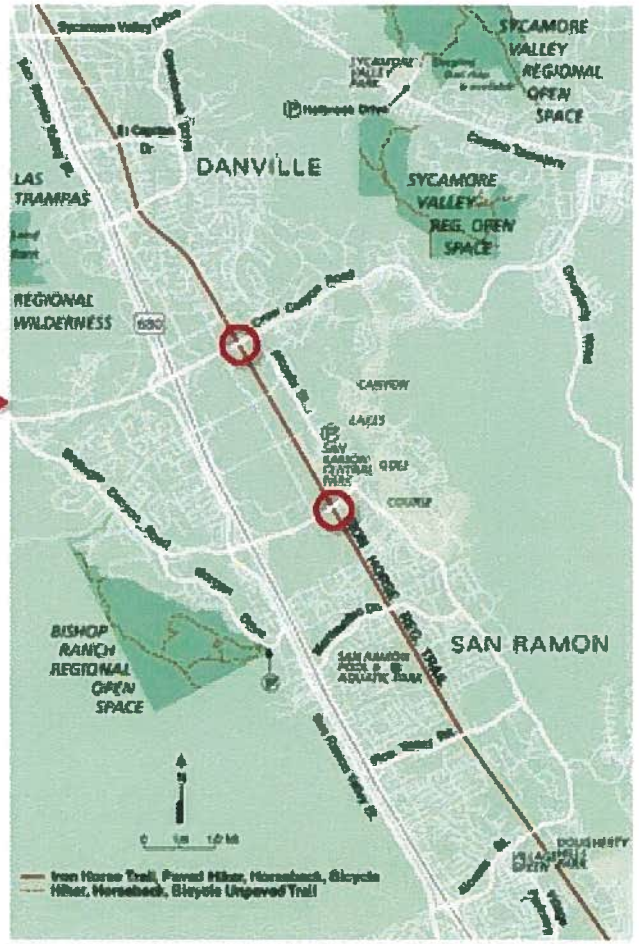
- San Ramon Open Government Survey
  - October 30 through November 26
  - Signage along IHT directing public to on-line survey (photo)
  - San Ramon website
  - Press Release
  - TAC
  - Review Survey – jump to online survey

Online Survey

Introduction:

The City of San Ramon is currently studying a proposed bicycle and pedestrian overcrossing along the Iron Horse Trail at Bollinger Canyon Road. A feasibility study conducted in 2009 identified this overcrossing as an important connection to improve accessibility, safety, and traffic operations.





IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

Online Survey

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists, and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon Road crossing.

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase.

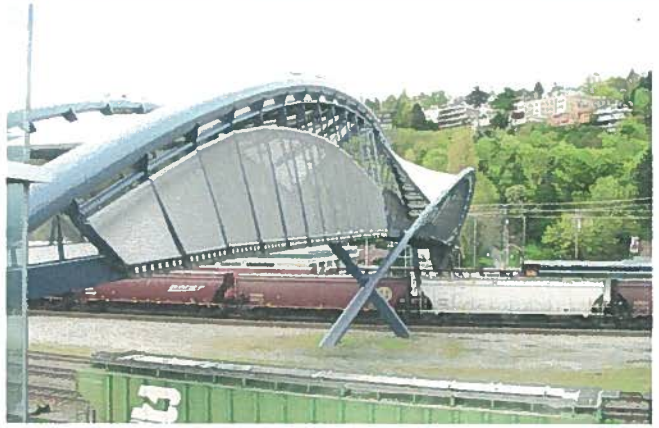
In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the Bollinger Canyon overcrossing and whether to maintain the at-grade crossing facility, and the design aesthetic for the location.

Please download the technical memo for a visual tour of the project and click on the POST button below to share your thoughts with the City.

Online Survey

Bridge Type:
Concrete deck on steel members supported by steel arches

Colors:
White-painted steel, galvanized (grey) barriers and fences

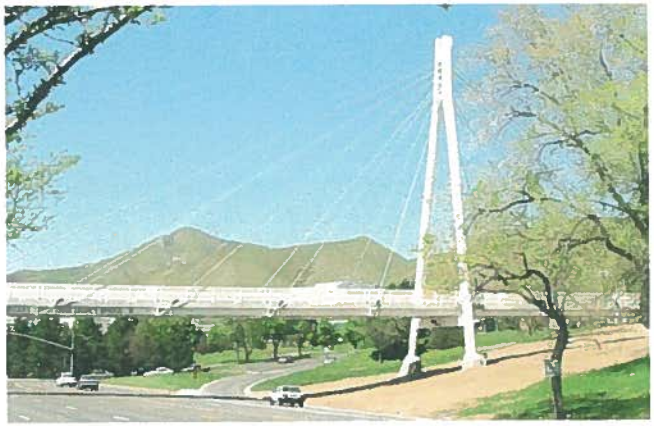


Bridge Type:
Concrete deck on steel members supported by combination of three overlapping steel arches

Special Feature:
Partial coverage by stretched fabric architectural roof

Colors:
Grey-painted steel (arches and barriers), white roof

Online Survey



Bridge Type:
Steel single tower cable-stayed main and secondary spans, supporting concrete deck on steel members

Special Feature:
Architectural lighting of cables and tower

Colors:
White-painted steel (tower, deck frame, safety barriers), grey concrete support elements and steel cables

Bridge Type:
Concrete deck on steel members supported by steel prefabricated truss

Colors:
Brown-painted steel truss, white-painted handrails

Online Survey

Bridge Type:
Concrete box girder below concrete deck

Special Feature:
Partial coverage by steel roof structure

Colors:
Cream-painted concrete (girder, deck, supporting columns), red-painted steel (railings, roof structure)

Bridge Type:
Concrete deck on steel members supported by steel Virendeel truss, supported on concrete piers

Special Feature:
Ornate architectural detailing

Colors:
Teal-painted truss and ancillary architectural details, tan-colored concrete surfaces

Online Survey

Bridge Type:
Concrete deck on steel members supported by circular steel tied arches

Special Feature:
Glass curtain walls integrated with deck support cables

Colors:
Light blue-painted steel (arches and deck frame)

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Applied arch-shaped panels, ornate architectural details

Colors:
Tan-colored concrete (pier structure), rubble stone-finished concrete (bridge spans)

Online Survey

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Partial coverage by steel and glass roof structure

Colors:
Tan-colored concrete (bridge girders and piers), blue-painted steel (roof structure)

Bridge Type:
Concrete deck on steel members supported by tubular steel tied butterfly arches

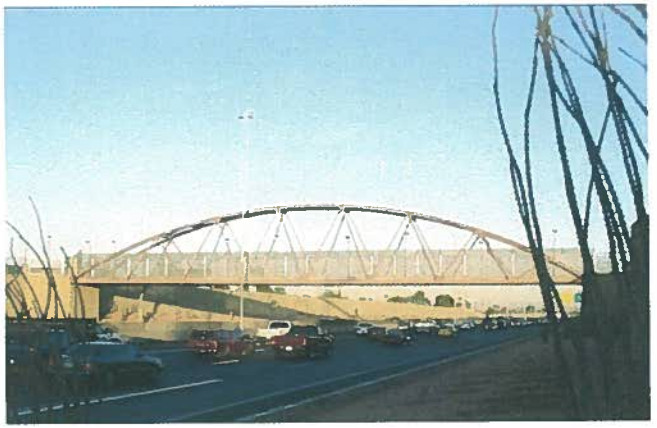
Special Feature:
Architectural all-glass elevator

Colors:
Orange-painted arches, white-painted deck and railings, green-tinted glass elevator, grey concrete (structural supports, stairs)

Online Survey

Bridge Type:
Concrete deck supported by concrete arch-shaped box girder

Colors:
Grey-colored girder and railing supports, tan-colored deck, rubble stone-finished abutment piers



Bridge Type:
Concrete deck on steel members supported by prefabricated steel arch-shaped truss

Colors:
Salmon-painted steel (truss and deck frame), galvanized (grey) railings and fences

Online Survey

Bridge Type:
Wooden deck on supporting structure

Special Features:
Sinuous deck, curvilinear aluminum cladding, bridge as "sculpture"

Colors:
Brown-stained wood deck, grey-silver colored steel panels, brushed aluminum "shingles"

Bridge Type:
Deck supported by shallow steel continuous through-girder, supported on triangulated steel struts

Special Features:
Glass deck with views to water through circular openings in steel through-girder

Colors:
Blue-painted steel (through-girder, struts), transparent glass deck

Online Survey

Bridge Type:
Steel deck supported by steel triangular-shaped truss girders

Special Features:
Architecture shaped to resemble a grasshopper

Colors:
Light red-painted steel (truss girders), grey-painted (or galvanized) steel (barrier frames, railings, added architectural features)

Bridge Type:
Concrete deck supported on concrete box girders, supported by concrete piers

Special Features:
Chain-link screen roof shaped with peaks to resemble mountain range

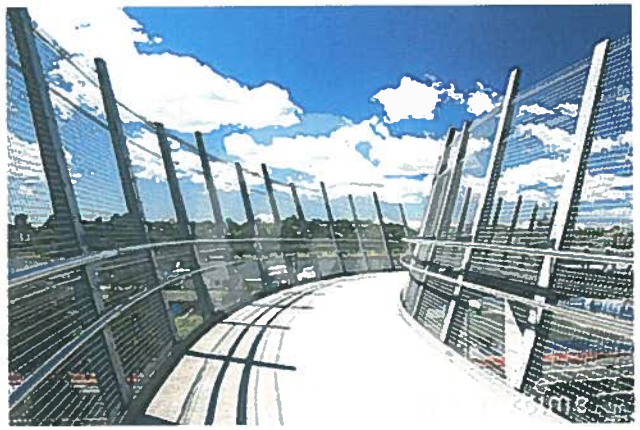
Colors:
Grey-colored concrete (deck, girders, piers), grey (or galvanized) fencing and screen roof

Online Survey

Bridge Type:
Steel girder bridge with concrete deck

Special Features:
Water drop shaped railing

Colors:
Salmon color paint



Bridge Type:
Integral concrete deck on curved steel box girder, supported by concrete piers

Special Features:
Deck lighting features integrated in steel railing supports

Colors:
Grey-colored steel (girder, railing frames and infill), grey-colored deck surface

Online Survey

Bridge Type:
Steel girder bridge

Special Features:
Open tube look with low railing

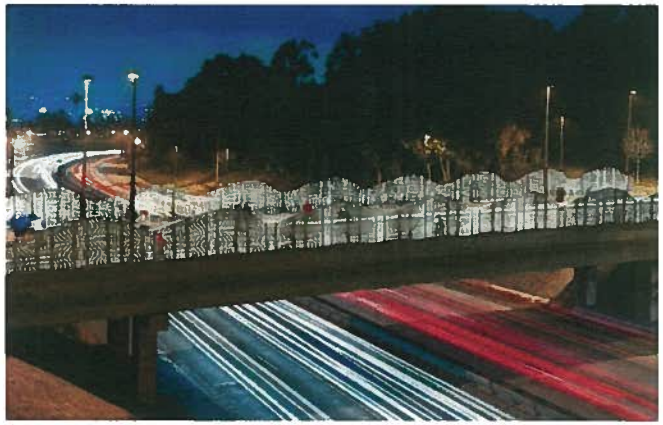
Colors:
Light brown

Bridge Type:
Concrete deck supported by concrete box girders, supported by concrete piers

Special Features:
Covered by colored wave-form screen roof

Colors:
Tan-colored concrete (deck, girders, piers), red-painted steel (screen roof), grey-painted (or galvanized) steel (roof support frames, barrier infill)

Online Survey



Bridge Type:
Concrete deck, supported by concrete precast beams, supported by concrete piers

Special Features:
Architectural railing shapes and light fixtures

Colors:
Tan-colored concrete (deck, beams, piers)

Community Engagement/Outreach

- Next Steps

1. Consultant Summarize Survey Results – December 2014
2. Presentation to City Council – January 2015
3. Provide updates to City Committees, Stakeholders February/March 2015
4. Council - Select Three Concepts March 2015
5. Council Decision Final Design – April 2015

CITY COUNCIL STAFF REPORT

DATE: **April 28, 2015**

TO: **City Council/City Manager**

FROM: **Phil Wong, Director, Planning/Community Development Department**
By: Lisa Bobadilla, Transportation Division Manager

SUBJECT: **San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (CIP 5530 and 5531) Status Update - Community Engagement/Outreach Component**

RECOMMENDED ACTION

Staff recommends the following: 1) City Council accept the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project Status Update Community Engagement/Outreach Component; and 2) Select three bridge design alternatives.

BACKGROUND/DISCUSSION

The City of San Ramon has secured the appropriation of $620,000 in Contra Costa Measure J Transportation for Livable Communities (CC-TLC) funding to initiate and complete the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (Community Engagement/Preliminary Design); of which $200,700 has been allocated to the Community Engagement/Outreach and Preliminary Design component.

Prior to the allocation of the TLC grant, Phase One – the San Ramon Valley Iron Horse Trail Corridor Concept Plan was finalized in 2009. The Plan evaluated the feasibility of constructing overcrossings to improved access and safety for bicycles and pedestrians along the Iron Horse Trail at arterial roadways (Bollinger Canyon and Crow Canyon). The Plan involved the development and evaluation of three concepts, feasibility, costs, and potential funding sources.

With the completion of Phase One (Corridor Concept Plan), Phase Two entails soliciting input and feedback from the community. To complete Phase Two, staff secured Transportation for Livable Communities (TLC) grant in the amount of $200,700. In 2004, voters of Contra Costa County approved Measure J, a ½-cent transportation sales tax program. Measure J includes Capital Improvement Projects and Countywide Capital and Maintenance Programs. Program Number 12 is titled - Transportation for Livable Communities (CC-TLC). In the Expenditure Plan - CC-TLC program description is as follows:

The CC-TLC Program is intended to support local efforts to achieve more compact, mixed-use development, and development that is pedestrian-friendly or linked into the overall transit system. The program will fund specific transportation projects that: (a) facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development, or (b) encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling

and/or transit usage. Typical investments include pedestrian, bicycle and streetscape facilities, traffic calming and transit access improvements. Both planning grants and specific transportation capital projects may receive funding under this program.

Jurisdictions will be eligible for projects that meet the eligibility criteria only if they are in compliance with the Growth Management Program at the time a grant is approved for funding allocation by the Authority. Eligible projects will be recommended to the Authority by each sub region based on a three- or five-year funding cycle, at the option of the Regional Transportation Planning Committee. Subregional programming targets will be based on the relative population share of the each in 2009, and adjusted every five years thereafter. Criteria are to include flexibility so that urban, suburban, and rural communities can be eligible.

On November 12, 2013, Council approved Resolution No. 2013-102 – authorizing the Mayor to Execute a Contract between the City of San Ramon and Biggs Cardosa Associates, Inc. to implement the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Overcrossing at Bollinger Canyon Road and Crow Canyon Road (CIP #5530 and 5531), in an amount not to exceed $200,700.

To date, staff and the Consultant Team have completed the following tasks:

- Establish Project Development Team - Completed
- Initiate Site Evaluations - Completed
- Develop Public Outreach Campaign - Completed
- Implement Community Design Charrettes – Completed
- Implement Website/Online Survey/Social Media – Completed
- Solicit input from City Committees/Commissions/Stakeholders – Completed
- Develop Design Alternatives –In progress

On October 28, 2014 and January 27, 2015, staff provided City Council with a summary of the Project, including feedback received from the Design Charrettes held spring 2014 and information gathered from the on-line survey.

As of April 20, 2015, the following outreach activities have been completed:

1. Implemented the City of San Ramon on-line Open Government survey – residents and the community at-large had an opportunity to provide comments and feedback on the architecture of 21 bridge design concepts. The on-line survey was available Thursday, October 30 through Wednesday, December 31, 2014; then again from January 28, 2015 – April 7, 2015;
2. Attended two San Ramon Farmers Markets;
3. Installed signage along the Iron Horse Trail informing the public to provide comment/feedback;
4. Attended Mayor's Breakfast – January 30, 2015;
5. Presentation to San Ramon Planning Commission - February 2, 2015;
6. Solicit input from East Bay Regional Park District – February 6, 2015;
7. Presentation to San Ramon Open Space Advisory Committee – February 9, 2015;

8. Presentation to San Ramon Parks Commission – February 11, 2015;
9. Presentation to San Ramon Economic Development Advisory Committee February 11, 2015;
10. Presentation to San Ramon Teen Council – February 17, 2015;
11. Presentation to San Ramon Transportation Advisory Committee – February 19, 2015;
12. Presentation to San Ramon Unified School District Liaison Committee - February 20, 2015;
13. Presentation to Contra Costa County Board of Supervisors Water, Infrastructure and Transportation Sub-Committee – March 2, 2015;
14. Presentation to San Ramon Architectural Review Board – March 12, 2015;
15. Presentation to San Ramon Transportation Demand Management Advisory Committee – March 16, 2015;
16. Presentation to San Ramon Arts Advisory Committee – March 18, 2015;
17. Presentation to San Ramon Senior Advisory Committee – April 6, 2015; and
18. Presentation to Sunset Development – April 27, 2015.

In addition to presentations, staff created a "Poster Board" with all 21 bridge renderings. The poster board was brought to the Chamber of Commerce Business Expo and displayed at the following city facilities:

1. Chamber of Commerce Business Expo – March 19, 2015;
2. Government 101 Planning/Community Development Presentation at the Permit Center – March 23, 2015;
3. Community Center - March 24 through March 27, 2015;
4. City Hall - March 30 through April 1, 2015;
5. Dougherty Station Community Center - April 1 through April 3, 2015; and
6. Permit Center – April 3 through April 6, 2015.

The Poster Board provided community members an opportunity to select a bridge design for both Bollinger Canyon Road and Crow Canyon Road overcrossings.

FISCAL ANALYSIS

The Community Engagement/Outreach Component of the Project is funded with a CC-TLC grant in the amount of $200,700. There are no direct impacts to the City's General Fund.

STEPS FOLLOWING APPROVAL

Following Council selection of three (3) bridge designs, the following will take place:

1. Consultant Team will refine the cost estimates, develop visual renderings/preliminary engineering bridge concepts;
2. Report presented to City Council – June 24, 2015;
3. Council select final bridge structure(s) – June 24, 2015; and
4. Initiate Environmental Review Phase of project – summer 2015.

ATTACHMENTS

None

IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

San Ramon
City Council

April 28, 2015

San Ramon Iron Horse Trail Bike/Ped Overcrossing

- Purpose
  1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
  2. Improve motor vehicle circulation by removing the at-grade crossings;
  3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
  4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Trail; and
  5. Increase trail usage by improving the comfort at the Bollinger Canyon and Crow Canyon Road crossings.

Background

Phase One – San Ramon Valley Iron Horse Trail Corridor Concept Plan — Funded with Transportation Planning Land Use (T-PLUS) Grant $100,000 - Completed 2009

Phase Two – Community Outreach/Preliminary Design Funded with Measure J Transportation for Livable Communities (TLC) - $200,700 – In progress

Background

Community Engagement/Outreach

Design Charrettes (2)	Spring 2014
On-Line Survey	Fall 2014 / Winter 2015
Signage along Iron Horse Trail	Fall 2014 / Winter 2015
San Ramon website	Fall 2014 / Winter 2015
Press Releases	Spring/Fall 2014 and Winter 2015
Newsletter Articles	Fall 2014/Winter 201
Farmers Markets (3)	Fall 2014
Info Board	Winter 2015 / Spring 2015
City Commissions/Committees	
Stakeholders (19)	Winter 2015 / Spring 2015

SAN RAMON IRON HORSE TRAIL
BICYCLE/PEDESTRIAN OVERCROSSINGS
BRIDGE DESIGNS

Vote For Your Favorite Bridge Design For Bollinger Canyon Rd. & Crow Canyon Rd.

Iron Horse Trail Information Board Locations

- San Ramon Chamber of Commerce Business Expo
  - March 19
- San Ramon Government 101 Presentation
  - March 23
- Community Center
  - March 24 - 27
- Dougherty Station Community Center
  - April 1 - April 2
- Permit Center
  - April 3 - April 6
- Senior Center
  - April 6 - April 7

On-Line Survey - Outreach

- City Website
- San Ramon/Danville Express – December 17, 2014
- San Ramon Observer
- San Ramon Patch
- Contra Costa Times – Published Newsletter Article – January 8, 2015
- Tri-Valley Times
- Bishop Ranch – Employee Newsletter November 13, 2014
- San Ramon Valley Unified School District
- HOA's – 26, representing 82 HOA's
- San Ramon Express – ongoing advertisement directing public to Open Government on-line survey

Community Outreach

- Mayors Breakfast – January 30, 3015
- Planning Commission – February 2, 2015
- East Bay Regional Park District – February 6, 2015
- Open Space Advisory Committee – February 9, 2015
- Economic Development Advisory Committee – February 11, 2015
- Parks Commission – February 11, 2015
- Teen Council – February 17, 2015
- Transportation Advisory Committee – February 19, 2015
- San Ramon Unified School District Liaison – February 20, 2015
- Contra Costa County Board of Supervisors Infrastructure Committee – March 2, 2015
- ARB – March 12, 2015

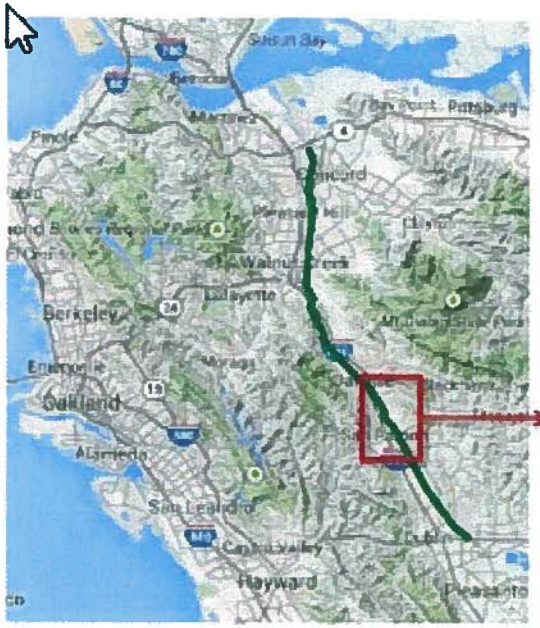
Community Outreach

- Transportation Demand Management Committee - March 16, 2015
- Arts Advisory Committee - March 18, 2015
- Chamber of Commerce Business Expo-March 19, 2015
- San Ramon Government 101 - March 24, 2015
- Senior Advisory Committee - April 6, 2015
- Sunset Development - April 27, 2015
- San Ramon Chamber of Commerce Board of Directors -
- Contra Costa County Iron Horse Trail Advisory Committee

Online Survey

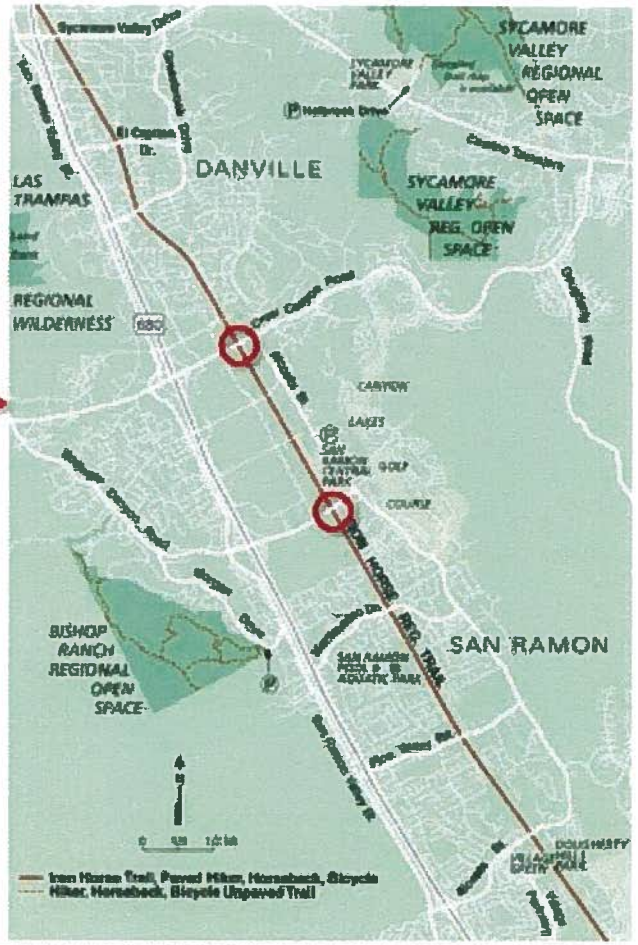
Introduction:

The City of San Ramon is currently studying a proposed bicycle and pedestrian overcrossing along the Iron Horse Trail at Bollinger Canyon Road. A feasibility study conducted in 2009 identified this overcrossing as an important connection to improve accessibility, safety, and traffic operations.



Iron Horse Trail

- Paved, multi-use trail from Concord to Dublin
- Follows the Southern Pacific Railroad San Ramon branch right-of-way



IRON HORSE TRAIL

Pedestrian and Bicycle Corridor Concept Plan

Online Survey

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists, and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon Road crossing

Online Survey

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase.

In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the Bollinger Canyon overcrossing and whether to maintain the at-grade crossing facility, and the design aesthetic for the location.

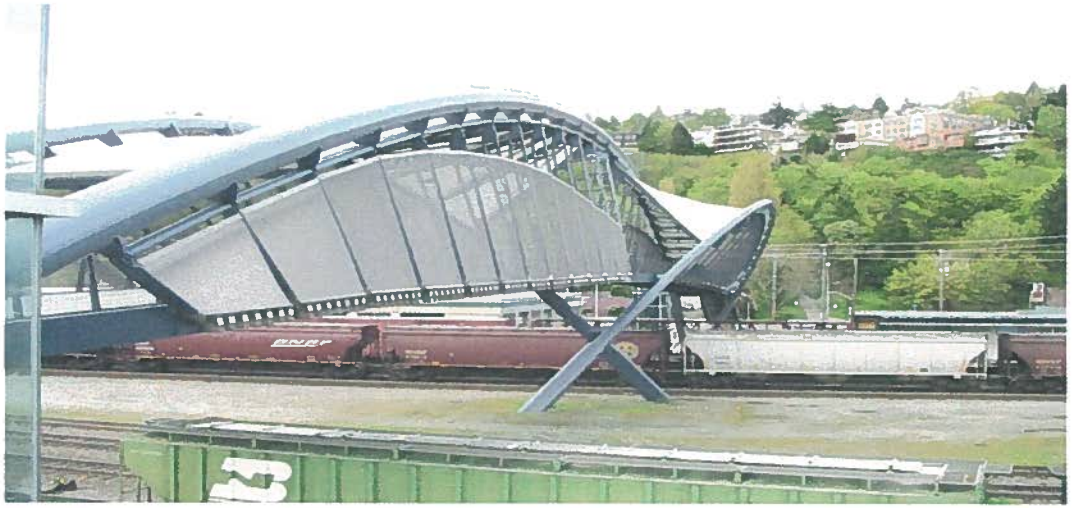
Please download the technical memo for a visual tour of the project and click on the POST button below to share your thoughts with the City.

On-Line Survey – Bridge I

Bridge Type:
Concrete deck on steel members supported by steel arches

Colors:
White-painted steel, galvanized (grey) barriers and fences

On-Line Survey – Bridge 2

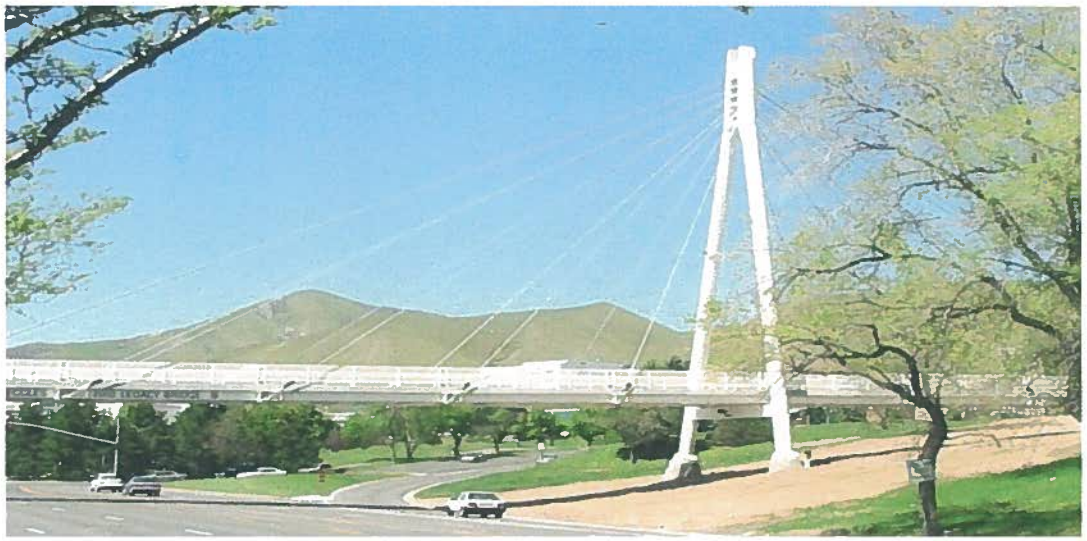


Bridge Type:
Concrete deck on steel members supported by combination of three overlapping steel arches

Special Feature:
Partial coverage by stretched fabric architectural roof

Colors:
Grey-painted steel (arches and barriers), white roof

On-Line Survey Bridge 3



Bridge Type:
Steel single tower cable-stayed main and secondary spans, supporting concrete deck on steel members

Special Feature:
Architectural lighting of cables and tower

Colors:
White-painted steel (tower, deck frame, safety barriers), grey concrete support elements and steel cables

Online Survey – Bridge 4

Bridge Type:
Concrete deck on steel members supported by steel prefabricated truss

Colors:
Brown-painted steel truss, white-painted handrails

Online Survey – Bridge 5

Bridge Type:
Concrete box girder below concrete deck

Special Feature:
Partial coverage by steel roof structure

Colors:
Cream-painted concrete (girder, deck, supporting columns), red-painted steel (railings, roof structure)

On-Line Survey – Bridge 6

Bridge Type:
Concrete deck on steel members supported by steel Virendeel truss, supported on concrete piers

Special Feature:
Ornate architectural detailing

Colors:
Teal-painted truss and ancillary architectural details, tan-colored concrete surfaces

Online Survey – Bridge 7

Bridge Type:
Concrete deck on steel members supported by circular steel tied arches

Special Feature:
Glass curtain walls integrated with deck support cables

Colors:
Light blue-painted steel (arches and deck frame)

On-Line Survey – Bridge 8

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Applied arch-shaped panels, ornate architectural details

Colors:
Tan-colored concrete (pier structure), rubble stone-finished concrete (bridge spans)

Online Survey- Bridge 9

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Partial coverage by steel and glass roof structure

Colors:
Tan-colored concrete (bridge girders and piers), blue-painted steel (roof structure)

On-Line Survey – Bridge 10

Bridge Type:
Concrete deck on steel members supported by tubular steel tied butterfly arches

Special Feature:
Architectural all-glass elevator

Colors:
Orange-painted arches, white-painted deck and railings, green-tinted glass elevator, grey concrete (structural supports, stairs)

Online Survey- Bridge 11

Bridge Type:
Concrete deck supported by concrete arch-shaped box girder

Colors:
Grey-colored girder and railing supports, tan-colored deck, rubble stone-finished abutment piers

On-Line Survey – Bridge 12

Bridge Type:
Concrete deck on steel members supported by prefabricated steel arch-shaped truss

Colors:
Salmon-painted steel (truss and deck frame), galvanized (grey) railings and fences

On-Line Survey – Bridge 13

Bridge Type:
Wooden deck on supporting structure

Special Features:
Sinuous deck, curvilinear aluminum cladding, bridge as "sculpture"

Colors:
Brown-stained wood deck, grey-silver colored steel panels, brushed aluminum "shingles"

Online Survey- Bridge 14

Bridge Type:
Deck supported by shallow steel continuous through-girder, supported on triangulated steel struts

Special Features:
Glass deck with views to water through circular openings in steel through-girder

Colors:
Blue-painted steel (through-girder, struts), transparent glass deck

Online Survey- Bridge 15

Bridge Type:
Steel deck supported by steel triangular-shaped truss girders

Special Features:
Architecture shaped to resemble a grasshopper

Colors:
Light red-painted steel (truss girders), grey-painted (or galvanized) steel (barrier frames, railings, added architectural features)

On-Line Survey – Bridge 16

Bridge Type:
Concrete deck supported on concrete box girders, supported by concrete piers

Special Features:
Chain-link screen roof shaped with peaks to resemble mountain range

Colors:
Grey-colored concrete (deck, girders, piers), grey (or galvanized) fencing and screen roof

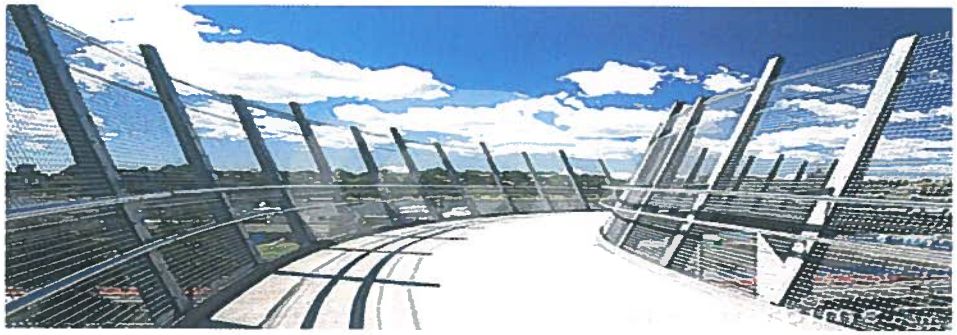
Online Survey- Bridge 17

Bridge Type:
Steel girder bridge with concrete deck

Special Features:
Water drop shaped railing

Colors:
Salmon color paint

On-Line Survey – Bridge 18



Bridge Type:
Integral concrete deck on curved steel box girder, supported by concrete piers

Special Features:
Deck lighting features integrated in steel railing supports

Colors:
Grey-colored steel (girder, railing frames and infill), grey-colored deck surface

Online Survey- Bridge 19

Bridge Type:
Steel girder bridge

Special Features:
Open tube look with low railing

Colors:
Light brown

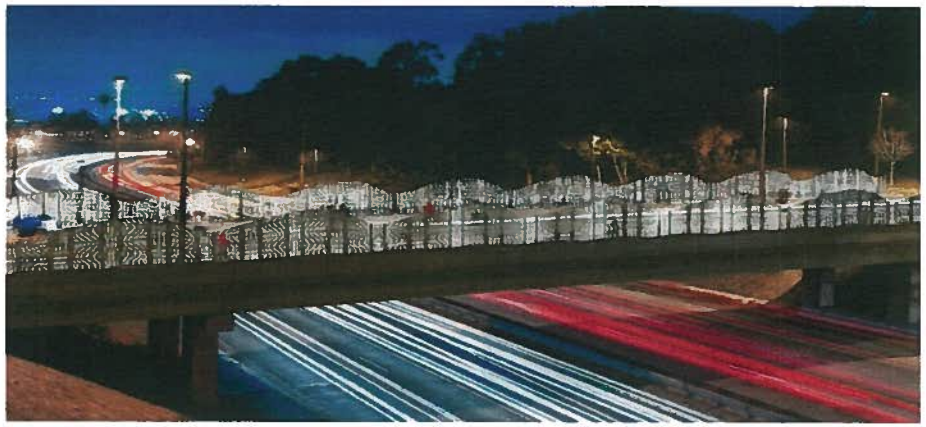
On-Line Survey – Bridge 20

Bridge Type:
Concrete deck supported by concrete box girders, supported by concrete piers

Special Features:
Covered by colored wave-form screen roof

Colors:
Tan-colored concrete (deck, girders, piers), red-painted steel (screen roof), grey-painted (or galvanized) steel (roof support frames, barrier infill)

Online Survey- Bridge 21



Bridge Type:
Concrete deck, supported by concrete precast beams, supported by concrete piers

Special Features:
Architectural railing shapes and light fixtures

Colors:
Tan-colored concrete (deck, beams, piers)

On-Line Survey Results

- San Ramon Open Government

1,117	Viewed on-line Survey for Bollinger
565	Viewed on-line Survey for Crow
1,682	**TOTAL Viewed on-line survey**

On-Line Survey Results

- Bollinger Canyon Road

  - 1,117 Views

    - 366 Responses
    - 181 Registered
    - 185 Did not Register

On-Line Survey Results

- Crow Canyon Road
  - 564 Views
    - 151 Responses
    - 91 Registered
    - 60 Did not Register

Survey Results - TOTAL

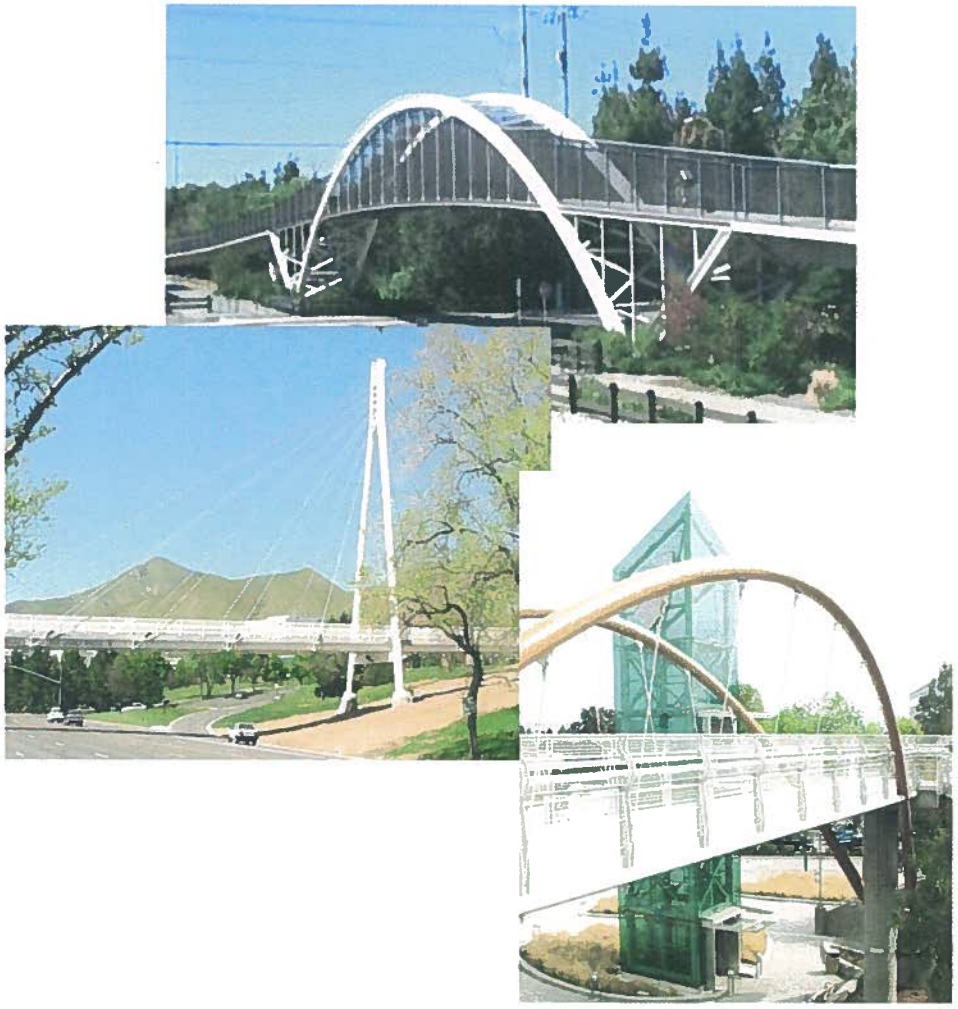
272	Registered on-line
23	Design Charrettes
119	Iron Horse Trail Info Board
414	Total Responses

Community Feedback

- Does Measure J have funding for Bike/Ped construction?
- Bridge must be ADA accessible
- How many survey responses are enough?
- Why do people have to register?
- Can only San Ramon residents take the survey?
- Can community provide feedback on Council "top three"
- Both bridges should be "iconic" to San Ramon
- To many design renderings to choose from
- How long will Environmental Phase take?
- When will Construction take place?
- Rendering may look different than actual construction
- Appreciate opportunity to provide feedback
- Will bridge design be the same for both locations?
- San Ramon should make final decision, only input from other public agencies.

On-Line Survey Results

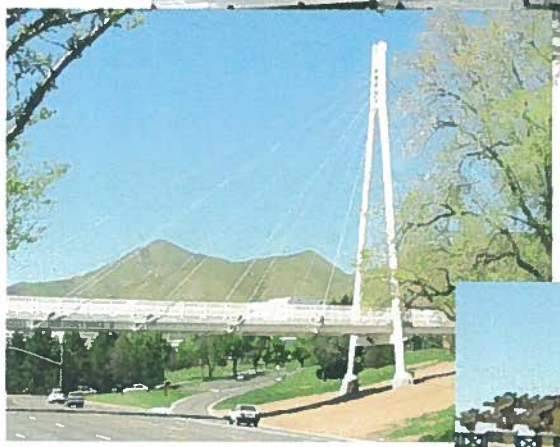
Bollinger Canyon Results



- Bridge 1, 3 and 10
- Complement new City Center
- Simple, modern, clean lines
- Open look and feel that preserves open views to hills

On-line Survey Results

Crow Canyon Road



- Bridge 1, 3 and 8

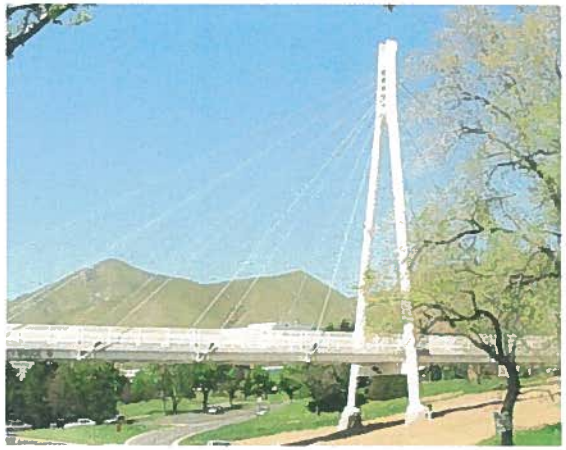
- Minimal treatment
- Simple, safe overcrossing
- Warm stone and other natural elements preferred

On-Line Survey, Design Charrettes, Info Board Final Results

Crow Canyon 1
Bollinger Canyon 2

Bollinger Canyon 3
Crow Canyon 4

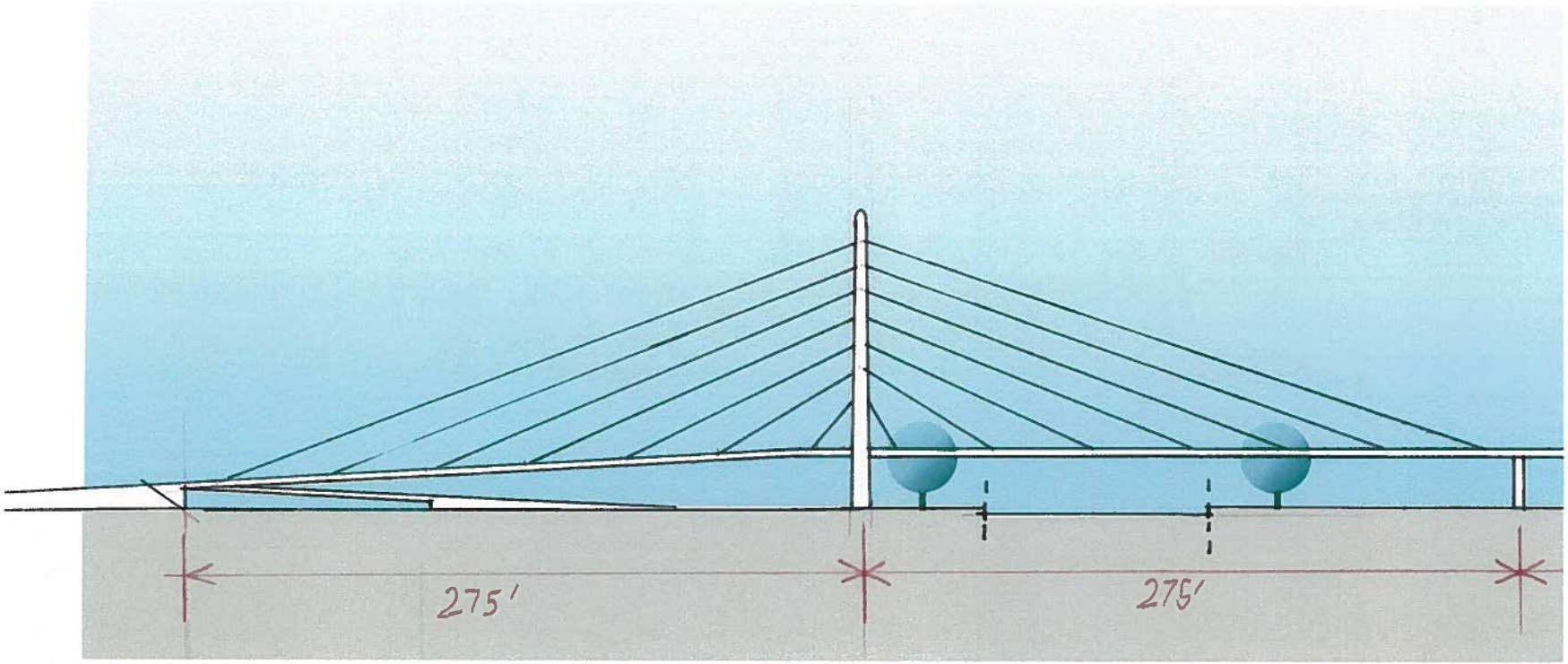
Bollinger Canyon 4
Crow Canyon 3



Bollinger Canyon 1
Crow Canyon 2

Top-Scoring Bridge Types

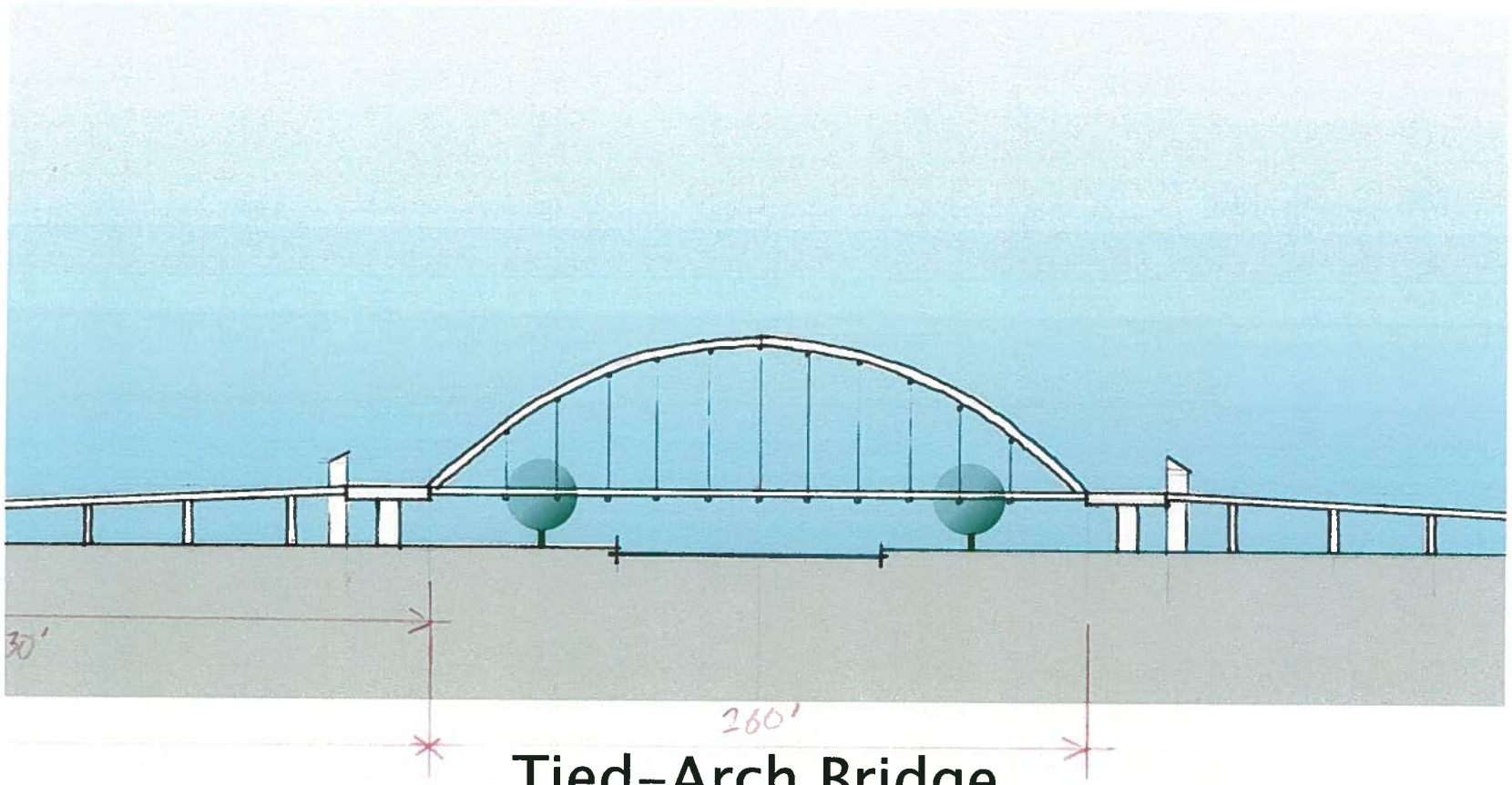
Examples of the two highest-scoring Bridge Types as they might appear at Bollinger Canyon and Crow Canyon crossings



Cable-Stayed Bridge

Top-Scoring Bridge Types

Examples of the two highest-scoring Bridge Types as they might appear at Bollinger Canyon and Crow Canyon crossings



Tied-Arch Bridge

Council Discussion

- Support Findings from On-Line Survey, Design Charrette and Info Board
  - Cable-Stayed Bridge
  - Tied-Arch Bridge
  - Cement/Stone
- Alternative Option(s)

- Staff Recommendation - Select Two Alternatives to Proceed for Preliminary Design

Next Steps

1. If agreed upon, gather Public Input on Concepts (on-line survey) - May
2. Consultant Team Refine Cost Estimates, Visual Renderings, Preliminary Design, Funding Opportunities - May/June
3. City Council Select Final Design - June 23, 2015
4. Implement Environmental Phase - Summer 2015

CITY COUNCIL STAFF REPORT

DATE: **July 14, 2015**

TO: **City Council/City Manager**

FROM: **Phil Wong, Director, Community Development Department**
By: Lisa Bobadilla, Transportation Division Manager

SUBJECT: **Accept Final Report for Community Engagement/Outreach Component of the Iron Horse Trail Bicycle/Pedestrian Overcrossing Project; and Select Final Bicycle/Pedestrian Overcrossings for Bollinger Canyon Road and Crow Canyon Road**

RECOMMENDED ACTION

Staff recommends the City Council accept final report for Community Engagement/Outreach component of the Iron Horse Trail Bicycle/Pedestrian Overcrossing project; and select final bicycle/pedestrian overcrossing for Bollinger Canyon Road and Crow Canyon Road.

BACKGROUND/DISCUSSION

The City secured the appropriation of $620,000 in Contra Costa Measure J Transportation for Livable Communities (CC-TLC) funding to initiate and complete the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (Community Engagement/Preliminary Design); of which $200,700 has been allocated to the Community Engagement/Outreach and Preliminary Design component.

Prior to the allocation of the TLC grant, Phase One – the San Ramon Valley Iron Horse Trail Corridor Concept Plan was finalized in 2009. The Plan evaluated the feasibility of constructing overcrossings to improved access and safety for bicycles and pedestrians along the Iron Horse Trail at arterial roadways (Bollinger Canyon and Crow Canyon). The Plan involved the development and evaluation of three concepts, feasibility, costs, and potential funding sources.

With the completion of Phase One (Corridor Concept Plan), Phase Two entails soliciting input and feedback from the community. To complete Phase Two, staff secured the TLC grant in the amount of $200,700. In 2004, voters of Contra Costa County approved Measure J, a ½-cent transportation sales tax program. Measure J includes Capital Improvement Projects and Countywide Capital and Maintenance Programs. Program Number 12 is titled - Transportation for Livable Communities (CC-TLC). In the Expenditure Plan - CC-TLC program description is as follows:

The CC-TLC Program is intended to support local efforts to achieve more compact, mixed-use development, and development that is pedestrian-friendly or linked into the overall transit system.

The program will fund specific transportation projects that: (a) facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development, or (b) encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling and/or transit usage. Typical investments include pedestrian, bicycle and streetscape facilities, traffic calming and transit access improvements. Both planning grants and specific transportation capital projects may receive funding under this program.

Jurisdictions will be eligible for projects that meet the eligibility criteria only if they are in compliance with the Growth Management Program at the time a grant is approved for funding allocation by the Authority. Eligible projects will be recommended to the Authority by each sub region based on a three- or five-year funding cycle, at the option of the Regional Transportation Planning Committee. Subregional programming targets will be based on the relative population share of the each in 2009, and adjusted every five years thereafter. Criteria are to include flexibility so that urban, suburban, and rural communities can be eligible.

On November 12, 2013, Council approved Resolution No. 2013-102 – authorizing the Mayor to Execute a Contract between the City of San Ramon and Biggs Cardosa Associates, Inc. to implement the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Overcrossing at Bollinger Canyon Road and Crow Canyon Road (CIP #5530 and 5531), in an amount not to exceed $200,700.

To date, staff and the Consultant Team have completed the following tasks:

- Establish Project Development Team - Completed
- Initiate Site Evaluations - Completed
- Develop Public Outreach Campaign - Completed
- Implement Community Design Charrettes – Completed
- Implement Website/Online Survey/Social Media – Completed
- Solicit input from City Committees/Commissions/Stakeholders – Completed
- Develop Design Alternatives – Completed

On October 28, 2014, January 27, 2015 and April 24, 2015, staff provided City Council with updates of the Project, including feedback received from the Design Charrettes held spring 2014 and information gathered from the on-line survey. A summary of the outreach activities to date:

1. Implemented the City of San Ramon on-line Open Government survey – residents and the community at-large had an opportunity to provide comments and feedback on the architecture of 21 bridge concepts. The on-line survey was available Thursday, October 30 through Wednesday, December 31, 2014; then again from January 28, 2015 through April 7, 2015.
2. Attended three San Ramon Farmers Market;
3. Installed signage along the Iron Horse Trail informing the public to provide comment/feedback;
4. Attended Mayor Breakfast – January 30, 2015;
5. Presentation to San Ramon Planning Commission - February 2, 2015;

6. Solicit input from East Bay Regional Park District – February 6, 2015;
7. Presentation to San Ramon Open Space Advisory Committee – February 9, 2015;
8. Presentation to San Ramon Parks Commission – February 11, 2015;
9. Presentation to San Ramon Economic Development Advisory Committee February 11, 2015;
10. Presentation to San Ramon Teen Council – February 17, 2015;
11. Presentation to San Ramon Transportation Advisory Committee – February 19, 2015;
12. Presentation to San Ramon Unified School District Liaison Committee - February 20, 2015;
13. Presentation to Contra Costa County Board of Supervisors Water, Infrastructure and Transportation Sub-Committee – March 2, 2015;
14. Presentation to San Ramon Architectural Review Board – March 12, 2015;
15. Presentation to San Ramon Transportation Demand Management Advisory Committee – March 16, 2015;
16. Presentation to San Ramon Arts Advisory Committee – March 18, 2015;
17. Presentation to San Ramon Senior Advisory Committee – April 6, 2015;
18. Presentation to Sunset Development – April 27, 2015; and
19. Presentation to San Ramon Chamber of Commerce – June 23, 2015.

In addition to presentations, staff created a "Poster Board" with all 21 bridge renderings. The poster board was displayed at the San Ramon Chamber of Commerce Business Expo and at the following city facilities:

1. Chamber of Commerce Business Expo – March 19, 2015;
2. Government 101 Planning/Community Development Presentation at the Permit Center March 23, 2015;
3. Community Center - March 24 through March 27, 2015;
4. City Hall - March 30 through April 1, 2015;
5. Dougherty Station Community Center - April 1 through April 3, 2015; and
6. Permit Center – April 3 through April 6, 2015.

The Poster Board provided community members an opportunity to select a bridge design for both Bollinger Canyon Road and Crow Canyon Road overcrosisngs.

San Ramon Open Government – On Line Survey

Bollinger Canyon Road

1,117	Viewed on-line Survey
366	Responded
181	Responded and Registered
185	Responded – Did Not Register

Crow Canyon Road

565	Viewed on-line Survey
151	Responded
91	Responded and Registered
60	Responded – Did Not Register
1,682	**TOTAL Viewed on-line survey**

San Ramon Open Government (On Line Survey), Design Charrettes, and Info Board

272	Responded and Registered - On line Survey
23	Attended Design Charrettes
119	Commented on Iron Horse Trail Info Board
414	**Total Responses**

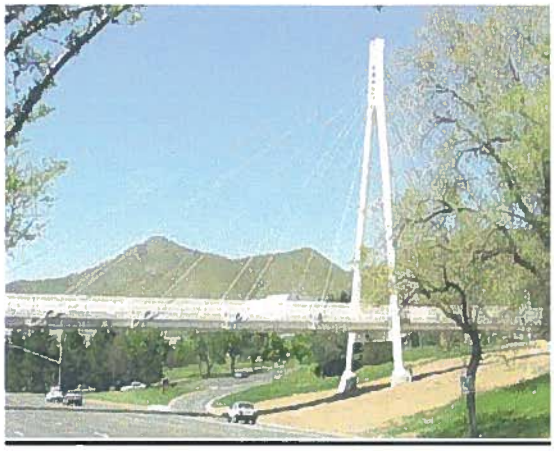
Bollinger Canyon Road Top 3 Choices and Comments

- Overcrossing should complement new City Center;
- Simple, modern, clean lines; and
- Open look and feel that preserves open views to hills

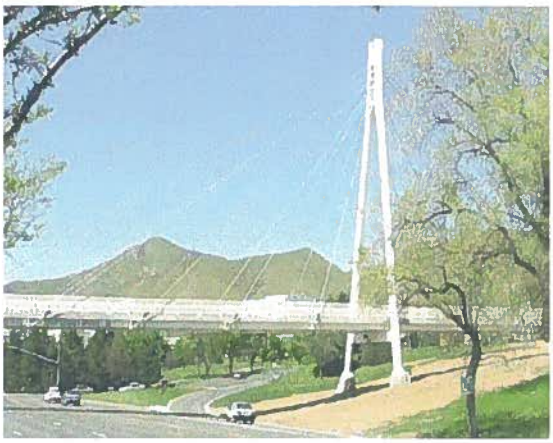
Crow Canyon Road Top 3 Choices and Comments

- Minimal treatment;
- Simple, safe overcrossing; and
- Warm stone and other natural elements preferred

Bollinger Canyon Road



Crow Canyon Road



Input and/or Questions from the Community:

- Does Measure J have funding for Bike/Ped construction?
- Bridge must be ADA accessible.
- How many survey responses are enough?
- Why do people have to register?
- Can only San Ramon residents take the survey?
- Can community provide feedback on Council "top three"
- Both bridges should be "iconic" to San Ramon.
- To many design renderings to choose from.
- How long will Environmental Phase take?
- When will Construction take place?
- Rendering may look different than actual construction.
- Appreciate opportunity to provide feedback.
- Will bridge design be the same for both locations?
- San Ramon should make final decision, only input from other public agencies.

City Council Action

Following a presentation by staff and consultants of a wide range of conceptual bridge alternatives ("bridge types") for the Bollinger Canyon and Crow Canyon crossings at the April 28, 2015 Council meeting, the Council directed staff to further study the following alternatives (including sub-variations of each as described below) and present the results of this study at the Council meeting on July 14, 2015:

- Bollinger Canyon Road:
  Option 1: Cable-Stayed main span
  Option 2: Tied Arch main span

- Crow Canyon Road:
  Option 1: Tied Arch main span

In preparation for this meeting, the Consultant Team has prepared conceptual cost estimates, visual renderings, and other exhibits for Council consideration in selecting or confirming the final bridge alternatives to carry forward into the preliminary engineering and environmental clearance phases of this project.

Following the presentation and discussion, staff requests Council to select one of the two options for Bollinger Canyon (cable-stayed or tied arch). If Council selects Option 1 (cable-stayed), Council is further requested to select one of two sub-variations for the location of the bridge's main tower:

- Option 1-A: Cable-Stayed main span with main tower on south side of Bollinger Canyon Road.
- Option 1-B: Cable-Stayed main span with main tower on north side of Bollinger Canyon Road.

In the case of Crow Canyon (tied arch), staff requests Council to confirm acceptance of the single option presented.

In all cases regarding the selected options, Council is further invited to make comments and recommendations regarding further study in the next phase of the project.

Additional Details on the Bridge Alternatives Presented

- Elements in common with all Bollinger Canyon Bridge alternatives:

    - All alternatives feature a main span crossing over Bollinger Canyon Road, with a span long enough (240 feet) to minimize visual impact and allow for future road widening and generous sidewalk and landscape buffer opportunities along the street.
    - All alternatives are "clear span", i.e. no supporting columns in the street or median.
    - The minimum deck width is 20 feet, to accommodate the significant foot traffic anticipated to be generated by the City Center improvements, in addition to expected

Iron Horse Trail usage. Although subject to further study, the deck may be subdivided into separate walking and cycling "lanes", in respect to the anticipated high localized pedestrian usage.

- All alternatives include an extended elevated section to the north (supported on columns) prior to descending to ground level – the purpose of this elevated section is to minimize visual and functional blockage of pedestrian circulation between Phase 2 of City Center, City Hall, and Central Park.
- Similar to other signature overcrossings of the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road), all alternatives include approach sections partly on columns instead of all on earthen fill, to reduce visual impact and blockage of pedestrian circulation at ground level.

- Additional sub-variations for Bollinger Canyon Bridge Cable-stayed options (Options 1-A and 1-B) – Note that Council is not being asked to select among these sub-variations – these are presented to show Council what staff and consultants propose to study further if these options are selected:

    - Single Mast Main Tower: A single vertical tower on the axis (centerline) of the bridge. The path splits around the tower with (subject to further study) cycling lane on one side and walking lane on the other. Note that the deck would widen around the tower to maintain an active width of 20 feet.
    - Split ("A-Frame") Main Tower: In this variation, the tower splits into two separate legs with the deck passing between them. At the top of the split, the tower continues upward as a single mast. The visual effect resembles a "capital A", hence the term "A-Frame". Note that many visual refinements are possible with this variation, all the subject of further study.

- Elements of Crow Canyon Bridge alternative:

    - The Tied-Arch alternative features a main span crossing over Crow Canyon Road, with a span long enough (240 feet) to minimize visual impact and allow for future road widening and generous sidewalk and landscape buffer opportunities along the street.
    - The alternative is "clear span", i.e. no supporting columns in the street or median.
    - The suggested deck width is15 feet. Although wider than similar overcrossings along the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road overcrossings have 10-foot wide decks), this added width better accommodates access by light emergency and service vehicles.
    - Similar to other signature overcrossings of the Iron Horse Trail (e.g., Treat Avenue and Ygnacio Valley Road), approach sections are primarily on columns instead of on earthen fill, to reduce visual impact and blockage of pedestrian circulation within the trail corridor at ground level.

- Approximate dimensions of alternatives – Note that these dimensions are "concept-level" and subject to revision and refinement during further study, including strategies to reduce the

relative or absolute costs of any alternative selected:

- Bollinger Canyon, Option 1-A (Cable-Stayed, tower on south side of street):
  - Main Span – 240 feet
  - Back Span / South Approach – 240 feet
  - Additional South Approach filled section – 240 feet
  - North column-supported extension – 240 feet
  - Column-supported North Approach – 240 feet
  - Additional North Approach filled section – 240 feet
  - TOTAL – 1440 feet

- Bollinger Canyon, Option 1-B (Cable-Stayed, tower on north side of street):
  - Main Span – 240 feet
  - Column-supported South Approach – 240 feet
  - Additional South Approach filled section – 240 feet
  - Back Span – 240 feet
  - Column-supported North Approach – 240 feet
  - Additional North Approach filled section – 240 feet
  - TOTAL – 1440 feet

- Bollinger Canyon, Option 2 (Tied Arch):
  - Main Span – 240 feet
  - Column-supported South Approach – 240 feet
  - Additional South Approach filled section – 240 feet
  - North column-supported extension – 240 feet
  - Column-supported North Approach – 240 feet
  - Additional North Approach filled section – 240 feet
  - TOTAL – 1440 feet

- Crow Canyon (Tied Arch):
  - Main Span – 240 feet
  - Column-supported South Approach – 240 feet
  - Additional South Approach filled section – 240 feet
  - Column-supported North Approach – 240 feet
  - Additional North Approach filled section – 240 feet
  - TOTAL – 1200 feet

FISCAL ANALYSIS

The Community Engagement/Outreach Component of the Project was funded with a CC-TLC grant in the amount of $200,700. There were no direct impacts to the City's General Fund. The next phase of the Project, Environmental Analysis is funded by the Cycle 2 Priority Development Area (PDA) grant from the Metropolitan Transportation Commission (MTC), administered by the Contra Costa Transportation Authority. The City Council, on April 14, 2015 adopted Resolution No. 2015-018 approving Agreement PDA.9.SANR between San Ramon and Contra Costa Transportation

Authority for $150,000 to conduct the Environmental Analysis for the Iron Horse Trail Bicycle/Pedestrian Overcrossings at Bollinger Canyon and Crow Canyon Road.

STEPS FOLLOWING APPROVAL

Following Council selection of bridge designs, the following will take place:

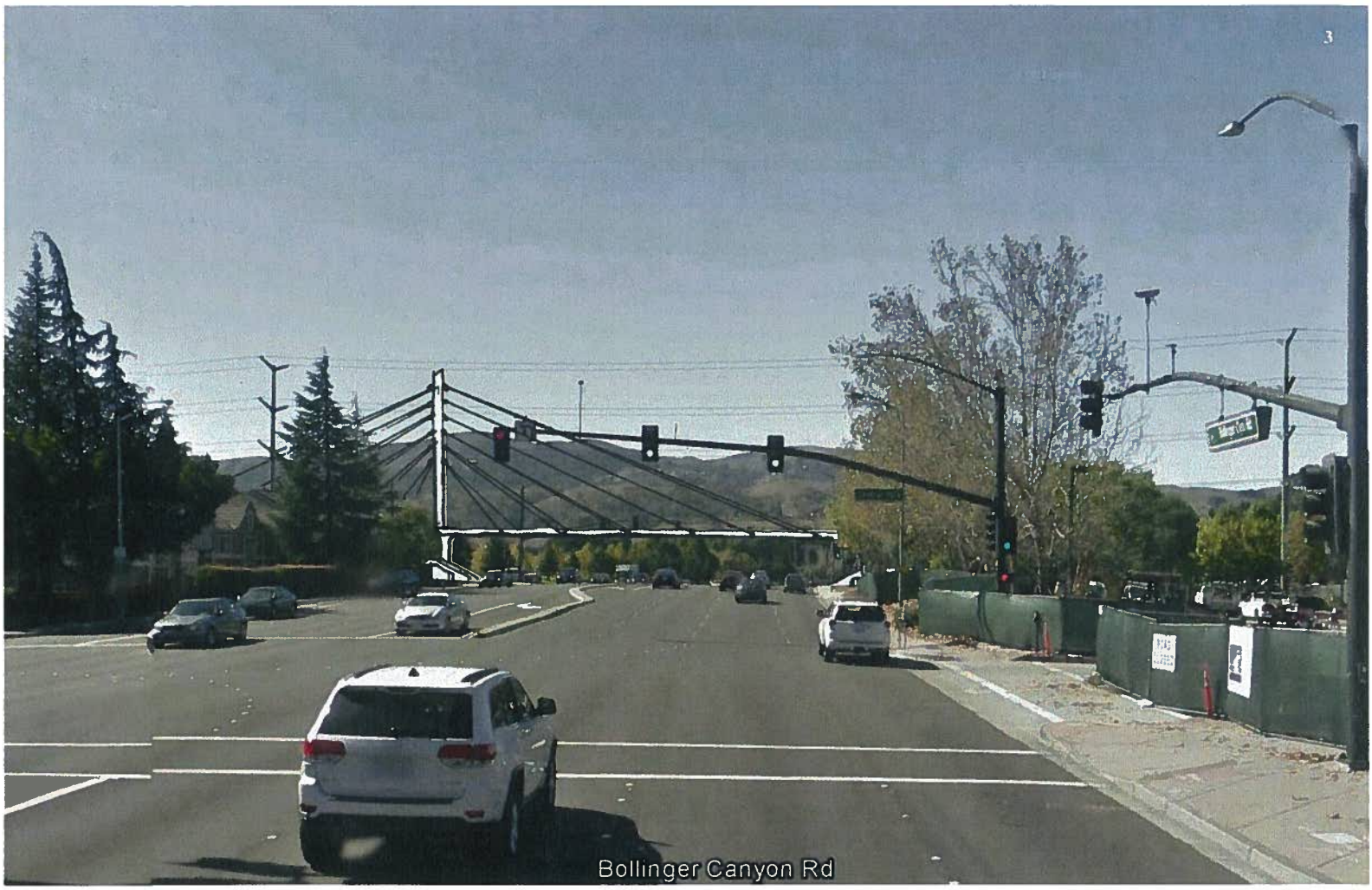
- Initiate Environmental Review Phase of project – summer 2015;
- Advocate for grant funding for bridge construction through Contra Costa Transportation Expenditure Plan – fall 2015/winter 2016;
- Present Environmental Analysis updates to City Council – winter/summer 2016;
- Adopt Final Environmental Analysis – Fall 2016; and
- Apply for grants through regional, state and federal programs – winter 2017.

ATTACHMENTS

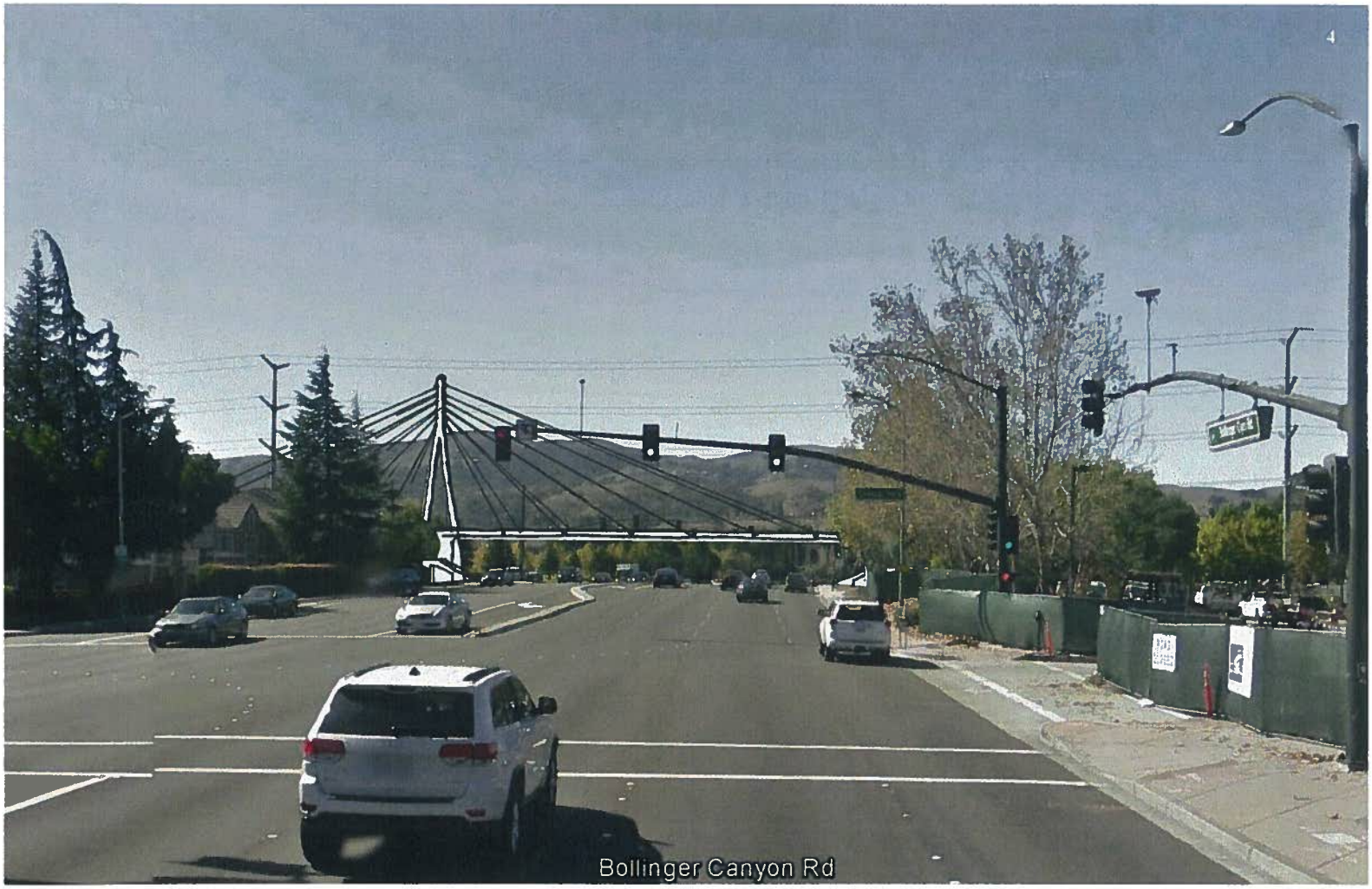
Attachment A: Conceptual Bridge Renderings

ıllinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking east between Camino Ramon and Iron Horse Trail

Ilinger Canyon Road / Option 1-A – Cable-Stayed – Split (A-Frame) Main Tower/ South – looking east between Camino Ramon and Iron Horse Tra



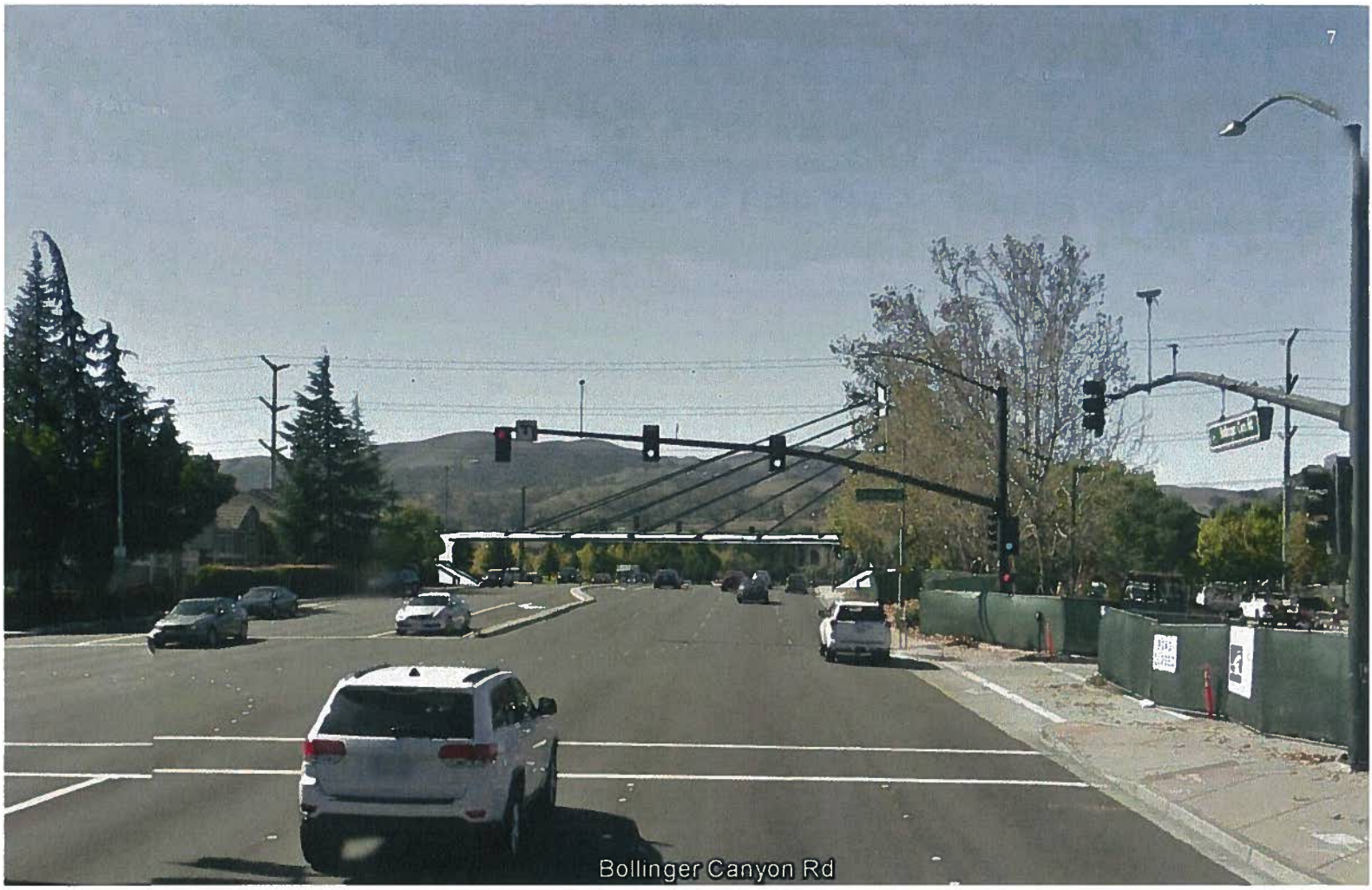
ollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking west from Market Place



ıllinger Canyon Road / Option 1-A – Cable-Stayed – Split (A-Frame) Main Tower / South – looking west from Market Place

ıllinger Canyon Road / Option 1-B – Cable-Stayed - Single Mast Main Tower / North – looking east between Camino Ramon and Iron Horse Trail

llinger Canyon Road / Option 1-B – Cable-Stayed – Split (A-Frame) Main Tower / North – looking east between Camino Ramon and Iron Horse Tra



ıllinger Canyon Road / Option 1-B – Cable-Stayed – Single Mast or Split (A-Frame) Main Towers / North – looking west from Market Place

Ilinger Canyon Road / Option 2 – Tied Arch – looking east between Camino Ramon and Iron Horse Trail

llinger Canyon Road / Option 2 – Tied Arch – looking west from Market Place

ow Canyon Road / Option 1 – Tied Arch – looking east between Camino Ramon and Iron Horse Trail

ow Canyon Road / Option 1 – Tied Arch – looking west from Alcosta Boulevard

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

San Ramon
City Council

July 14, 2015

San Ramon Iron Horse Trail Ped/Bike Overcrossings

Purpose:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon and Crow Canyon Road crossings.

Background

Phase One – San Ramon Valley Iron Horse Trail Corridor Concept Plan

- Funded with Transportation Planning Land Use (T-PLUS) Grant – $100,000
- Completed 2009

Phase Two – Community Outreach/Conceptual Design

- Funded with Measure J Transportation for Livable Communities (TLC) – $200,700
- In progress

Background

Community Engagement/Outreach

• Design Charrettes (2)	Spring 2014
• On-Line Survey	Fall 2014 / Winter 2015
• Signage along Iron Horse Trail	Fall 2014 / Winter 2015
• San Ramon website	Fall 2014 / Winter 2015
• Press Releases	Spring 2014 / Fall 2014/ Winter 2015
• Newsletter Articles	Fall 2014 / Winter 2014
• Farmers Markets (3)	Fall 2014
• Info Board	Winter 2015 / Spring 2015
• City Commissions/Committees/ Stakeholders (20)	Winter 2015 / Spring 2015

SAN RAMON IRON HORSE TRAIL
BICYCLE/PEDESTRIAN OVERCROSSINGS
BRIDGE DESIGNS

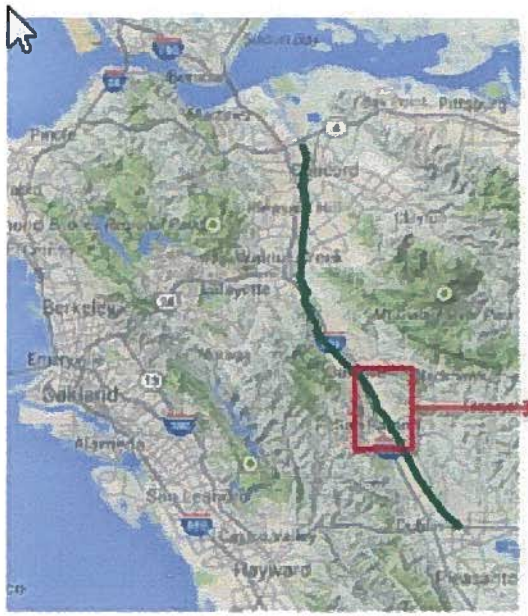
Vote For Your Favorite Bridge Design For
Bollinger Canyon Rd. & Crow Canyon Rd.

IRON HORSE TRAIL
Bicycle / Pedestrian Overcrossings Conceptual Design

Online Survey

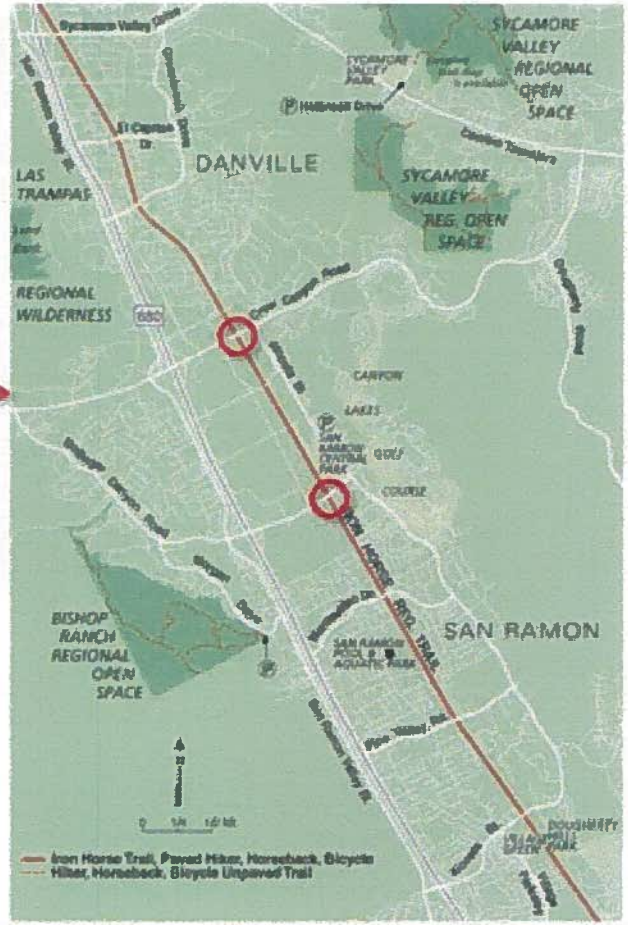
Introduction:

The City of San Ramon is currently studying a proposed bicycle and pedestrian overcrossing along the Iron Horse Trail at Bollinger Canyon Road. A feasibility study conducted in 2009 identified this overcrossing as an important connection to improve accessibility, safety, and traffic operations.



Iron Horse Trail

- Paved, multi-use trail from Concord to Dublin
- Follows the Southern Pacific Railroad San Ramon branch right-of-way



IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Online Survey

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists, and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon Road crossing

Online Survey

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase.

In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the Bollinger Canyon overcrossing and whether to maintain the at-grade crossing facility, and the design aesthetic for the location.

Please download the technical memo for a visual tour of the project and click on the POST button below to share your thoughts with the City.

On-Line Survey Results

San Ramon Open Government

1,117	Viewed on-line survey for Bollinger
565	Viewed on-line survey for Crow
1,682	TOTAL viewed on-line survey

On-Line Survey Results

Bollinger Canyon Road

- 1,117 Views

  - 366 Responses
  - 181 Registered
  - 185 Did not Register

On-Line Survey Results

Crow Canyon Road

- 564 Views

  - 151 Responses
  - 91 Registered
  - 60 Did not Register

Survey Results - TOTAL

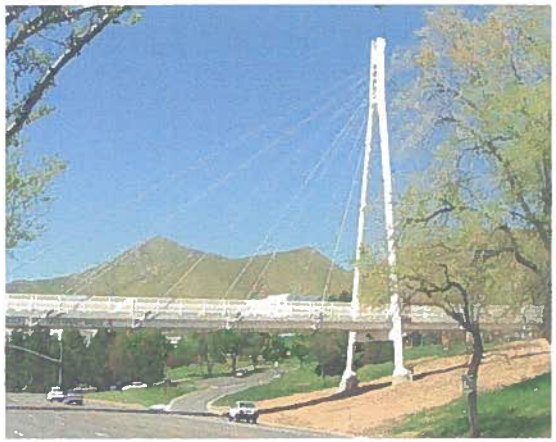
272	Registered On-line
23	Design Charrettes
119	Iron Horse Trail Info Board
414	Total Responses

Community Feedback

- Does Measure J have funding for Bike/Ped construction?
- Bridge must be ADA accessible
- How many survey responses are enough?
- Why do people have to register?
- Can only San Ramon residents take the survey?
- Can community provide feedback on Council "top three"?
- Both bridges should be "iconic" to San Ramon
- To many design renderings to choose from
- How long will Environmental Phase take?
- When will Construction take place?
- Rendering may look different than actual construction
- Appreciate opportunity to provide feedback
- Will bridge design be the same for both locations?
- City should make final decision, only input from other public agencies.

On-Line Survey Results

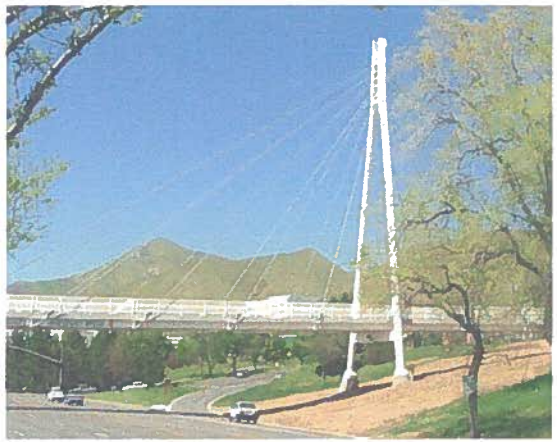
Bollinger Canyon Road



- Bridges 1, 3 and 10
- Complement new City Center
- Simple, modern, clean lines
- Open look and feel that preserves open views to hills

On-Line Survey Results

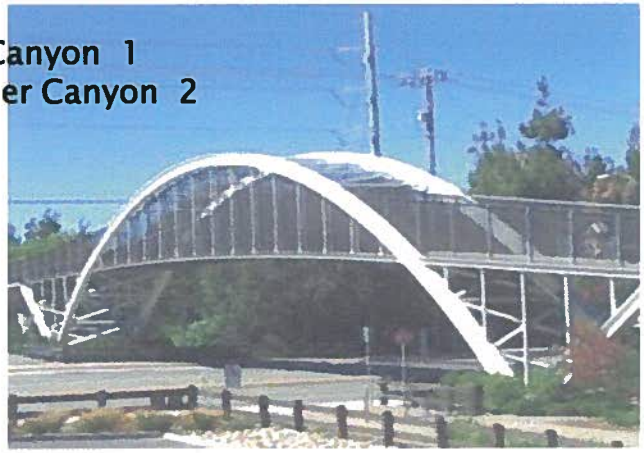
Crow Canyon Road



- Bridges 1, 3 and 8
- Minimal treatment
- Simple, safe overcrossing
- Warm stone and other natural elements preferred

Survey, Charrettes, and Info Board Final Results

Crow Canyon 1
Bollinger Canyon 2



Bollinger Canyon 3
Crow Canyon 4

Bollinger Canyon 4
Crow Canyon 3

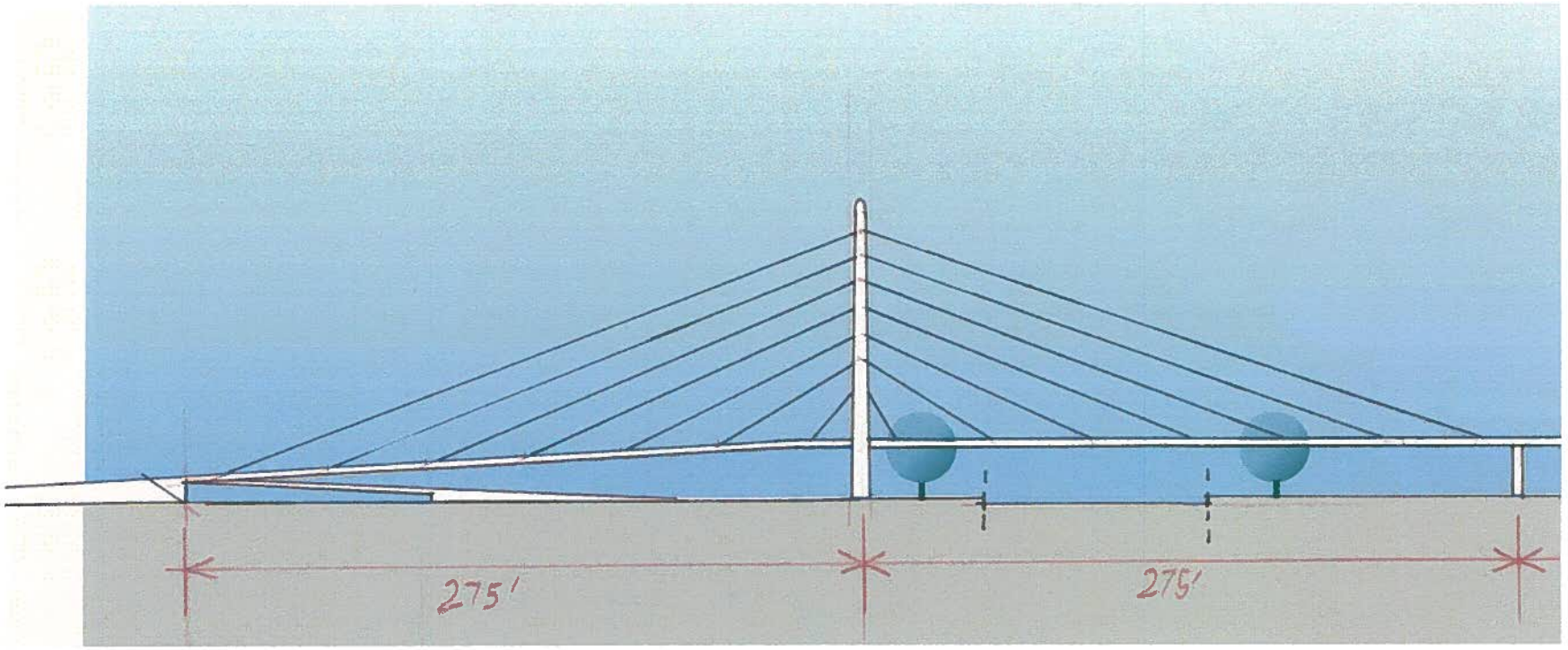
Bollinger Canyon 1
Crow Canyon 2

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Top-Scoring Bridge Types

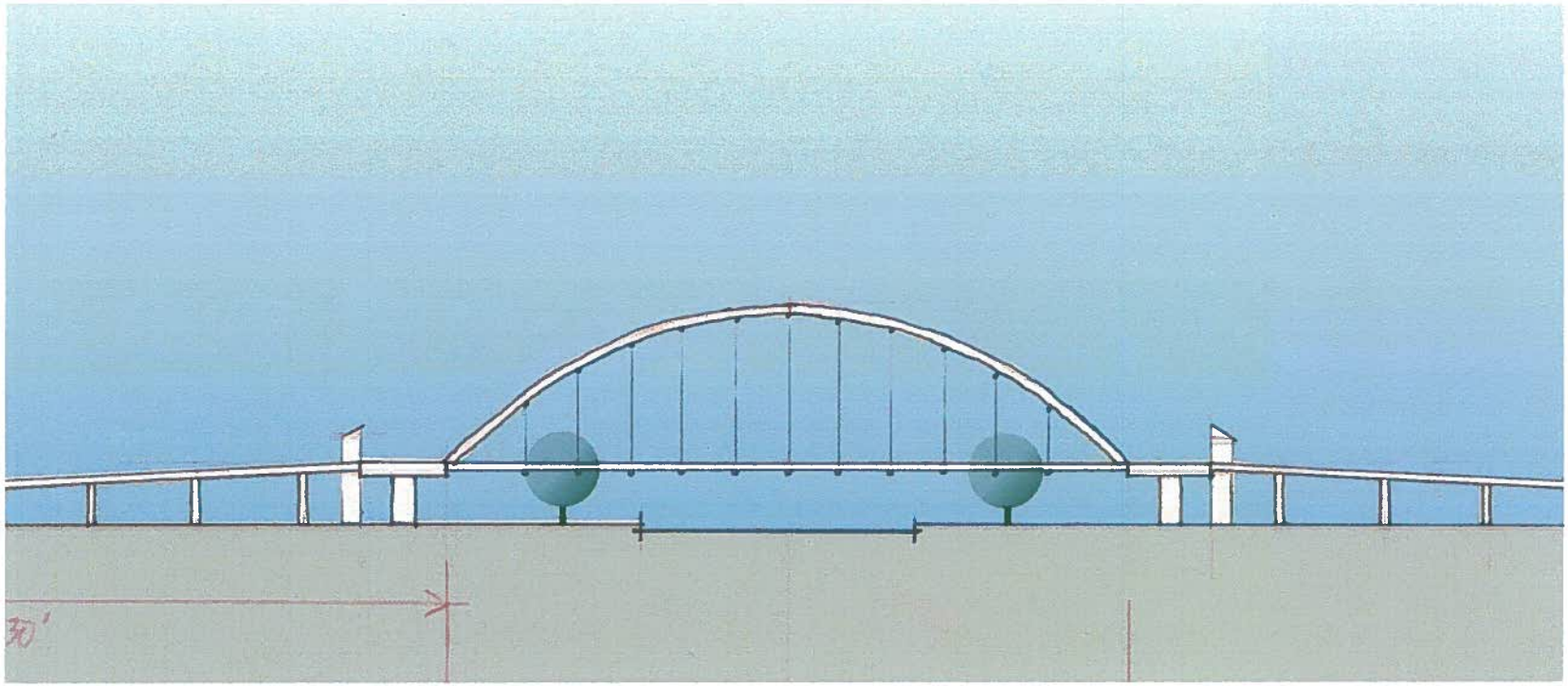
Examples of the two highest-scoring Bridge Types as they might appear at Bollinger Canyon and Crow Canyon crossings



Cable-Stayed Bridge

Top-Scoring Bridge Types

Examples of the two highest-scoring Bridge Types as they might appear at Bollinger Canyon and Crow Canyon crossings



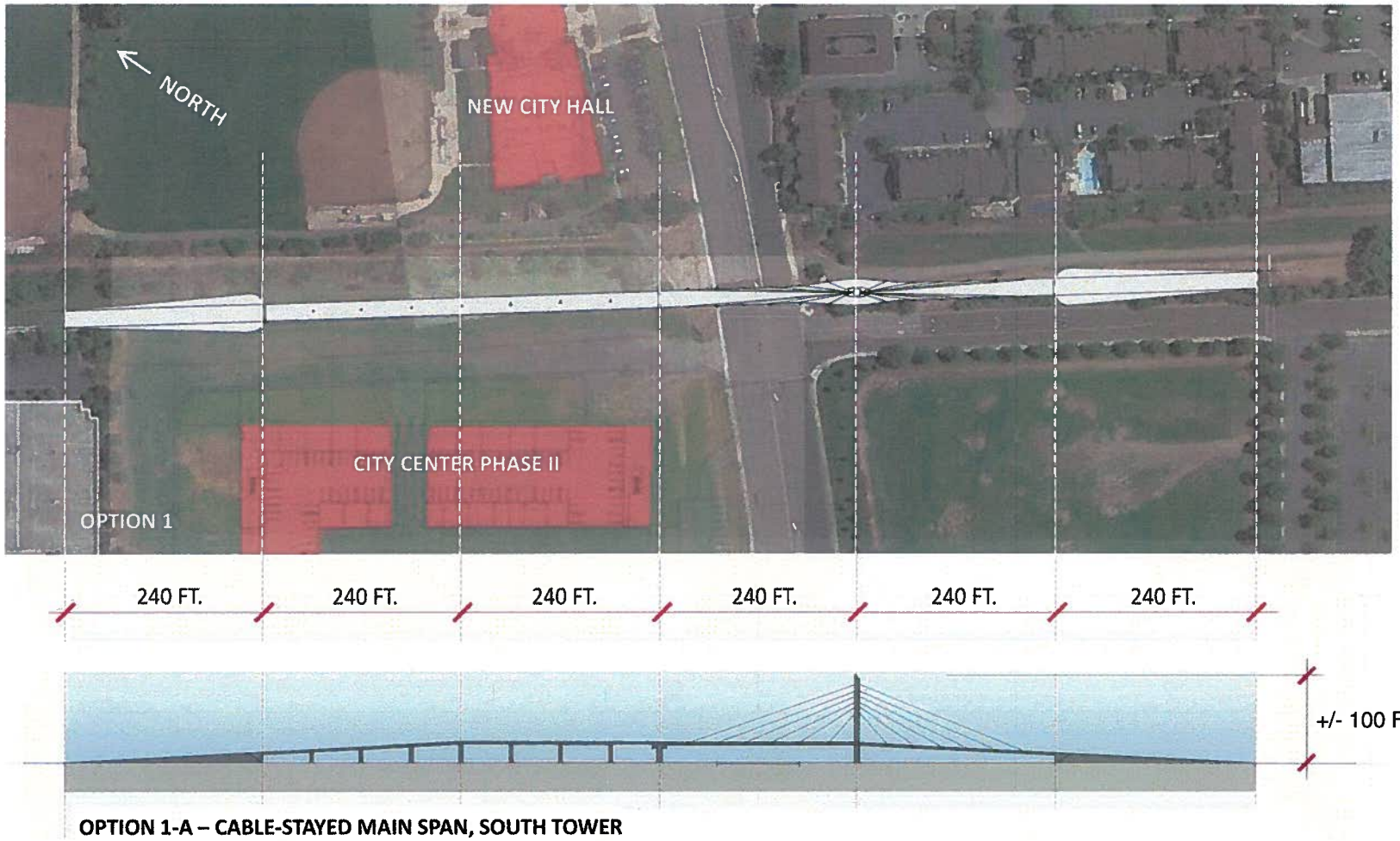
Tied Arch Bridge

Council Recommendation

April 23, 2015 meeting:

- Council Supported Findings from On-Line Survey, Design Charrette and Info Board
    - Cable-Stayed Bridge
    - Tied Arch Bridge

Bollinger Canyon Bridge Alternatives

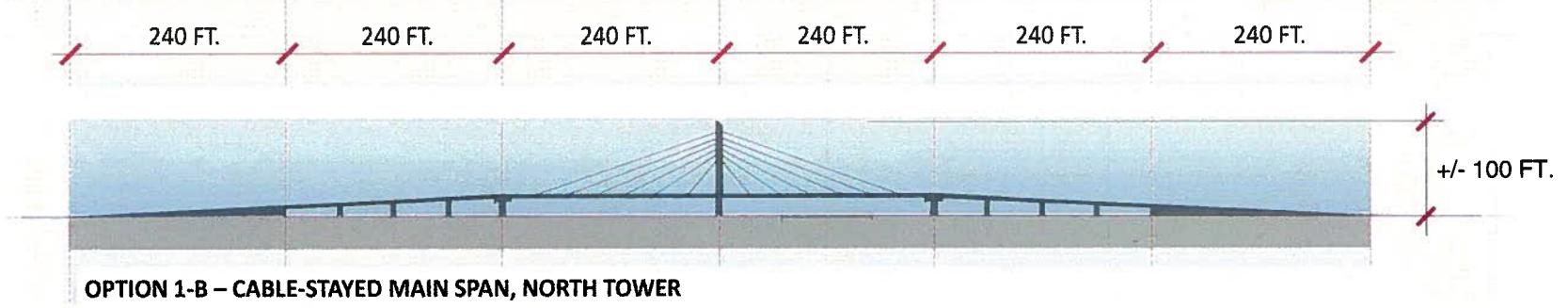


OPTION 1-A – CABLE-STAYED MAIN SPAN, SOUTH TOWER

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge Alternatives

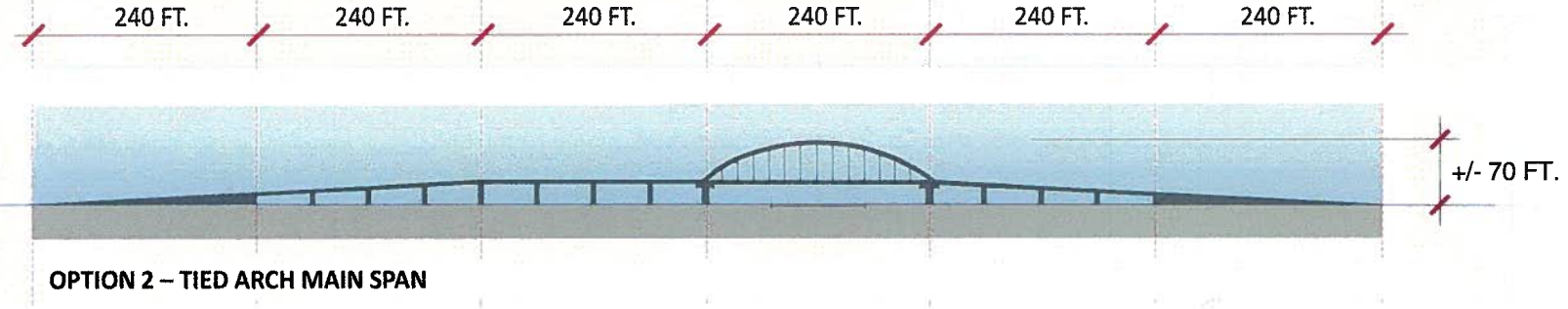


OPTION 1-B – CABLE-STAYED MAIN SPAN, NORTH TOWER

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge Alternatives

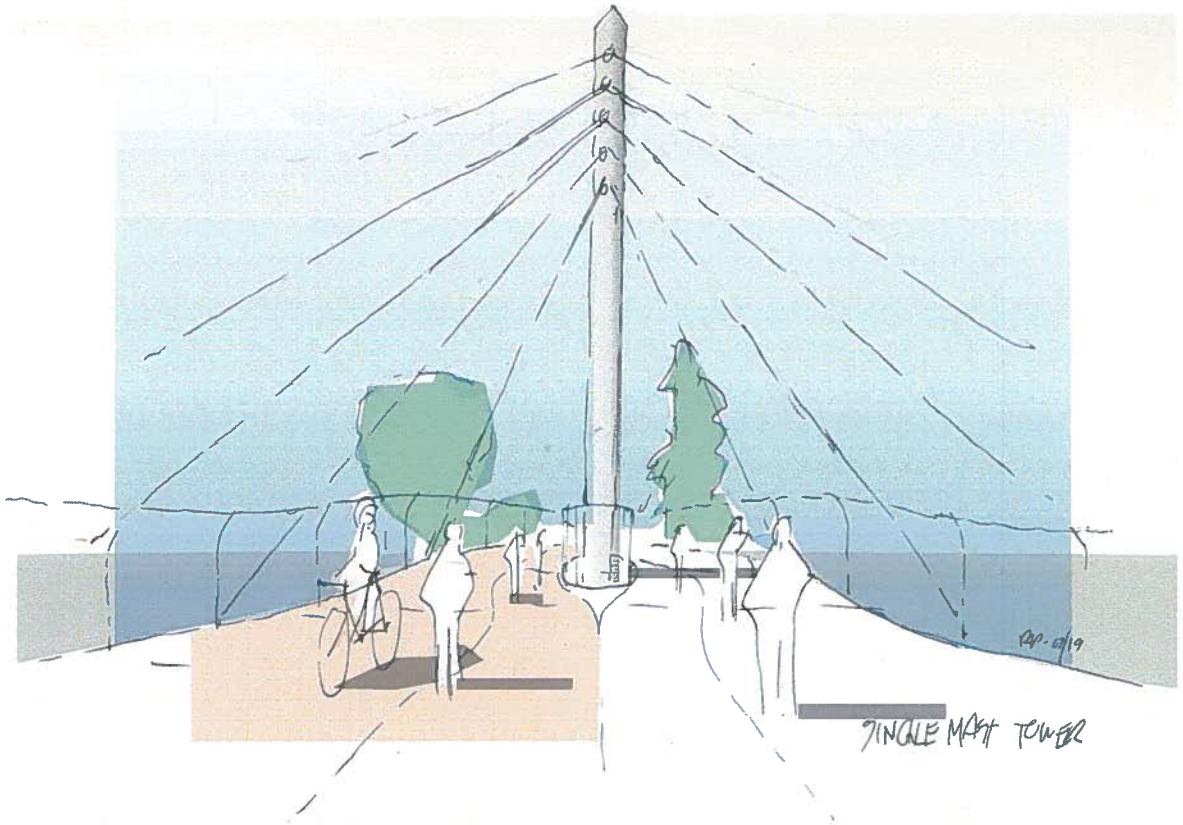


OPTION 2 – TIED ARCH MAIN SPAN

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Tower Options

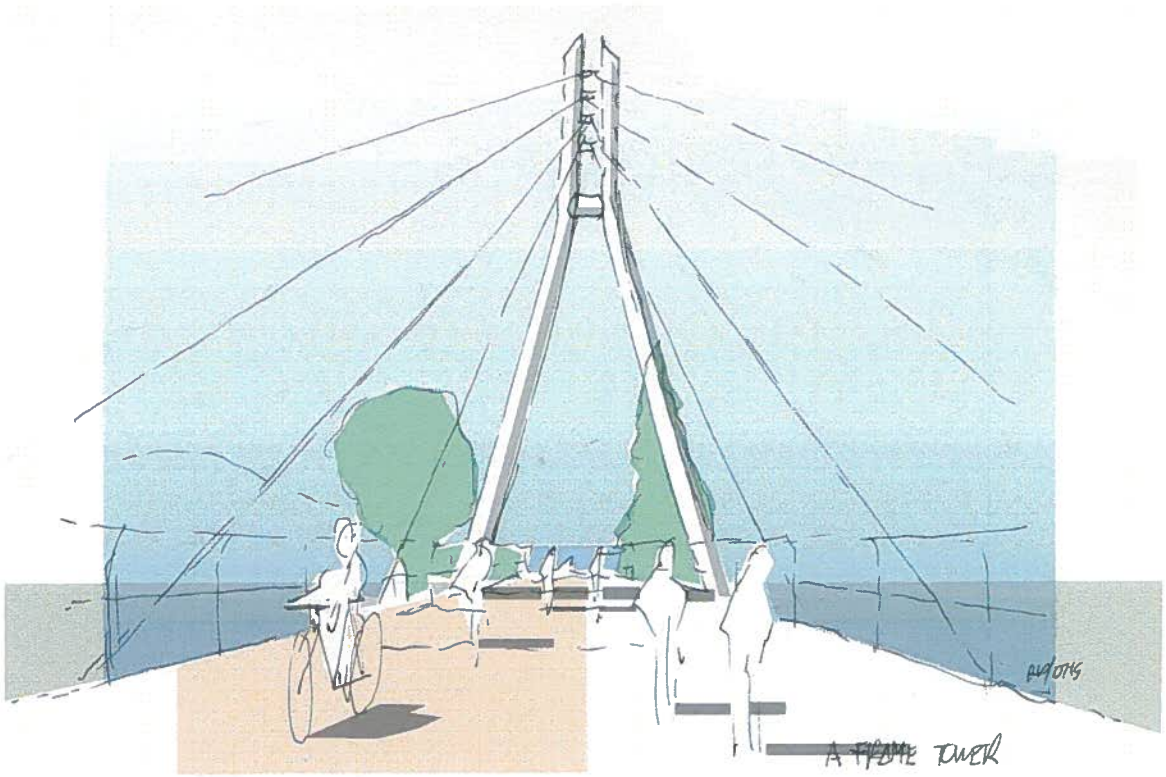


Bollinger Canyon Road / Options 1-A, 1-B – Single Mast Tower from Deck

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Tower Options



Bollinger Canyon Road / Options 1-A, 1-B – A-Frame Tower from Deck

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-A

Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-A

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-A

Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking west

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-A

Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking west

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-B

Bollinger Canyon Road / Option 1-B – Cable-Stayed - Single Mast Main Tower / North – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-B

Bollinger Canyon Road / Option 1-B – Cable-Stayed – A-Frame Main Tower / North – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-B

Bollinger Canyon Road / Option 1-B – Cable-Stayed – All Towers / North – looking west

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 2

Bollinger Canyon Road / Option 2 – Tied Arch – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

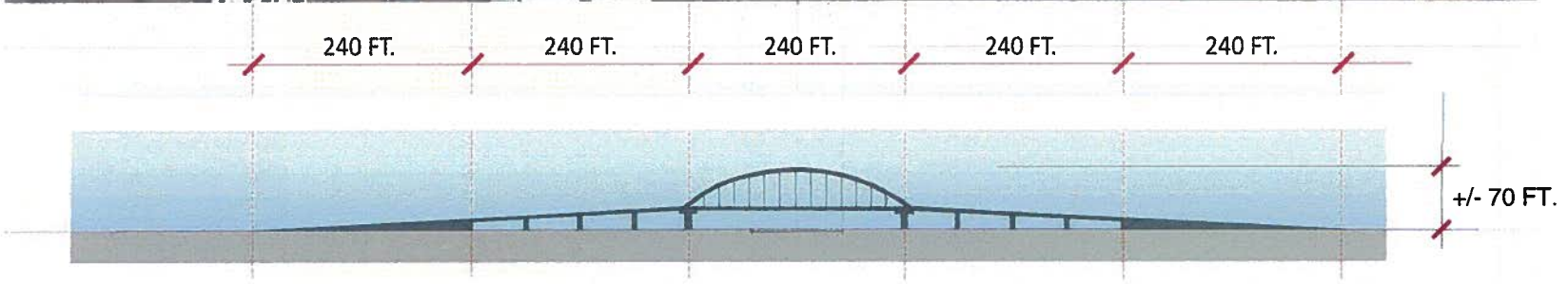
Bollinger Canyon Bridge – Option 2

Bollinger Canyon Road / Option 2 – Tied Arch – looking west

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Crow Canyon Bridge Alternative



OPTION 1 – TIED ARCH MAIN SPAN

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Crow Canyon Bridge – Option 1

Crow Canyon Road / Option 1 – Tied Arch – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Crow Canyon Bridge – Option 1

Crow Canyon Road / Option 1 – Tied Arch – looking west

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge Alternatives

Option 1-A

- Cable-Stayed Main Span
- Tower on south side of Bollinger Canyon Road
- Probable Total Cost Range:
  - 1440 ft. long / 20 ft. wide deck: $25 M
  - 1440 ft. long / 15 ft. wide deck: $19 M
  - 1200 ft. long / 15 ft. wide deck: $17 M

(Totals include "hard" and "soft" costs)

Bollinger Canyon Bridge Alternatives

Option 1-B

- Cable-Stayed Main Span
- Tower on north side of Bollinger Canyon Road
- Probable Total Cost Range:
  - 1440 ft. long / 20 ft. wide deck: $25 M
  - 1440 ft. long / 15 ft. wide deck: $19 M
  - 1200 ft. long / 15 ft. wide deck: $17 M

(Totals include "hard" and "soft" costs)

Bollinger Canyon Bridge Alternatives

Option 2

- Tied Arch Main Span
- Probable Total Cost Range:
  - 1440 ft. long / 20 ft. wide deck: $21 M
  - 1440 ft. long / 15 ft. wide deck: $17 M
  - 1200 ft. long / 15 ft. wide deck: $15 M

(Totals include "hard" and "soft" costs)

Crow Canyon Bridge Alternative

Option 1

- Tied Arch Main Span
- Probable Total Cost:
  - 1200 ft. long / 15 ft. wide deck: $15 M

(Total includes "hard" and "soft" costs)

Council Input and Decision

Bollinger Canyon Road

- Option I-A
- Option 1-B
- Option 2

Crow Canyon Road

- Option 1

Next Steps

1. Reaffirm Council decision from July 14 meeting by submitting Resolution (July 28) for Council adoption;
2. Inform Partner Agencies (Contra Costa Transportation Authority, CC County, EBRPD and stakeholders) of Conceptual Design decision;
3. Embark on Environmental Analysis with ARUP and LSA, Associates (funded with PDA planning grant);
4. Provide Council with updates related to Environmental Analysis; and
5. Submit funding request for final design and construction.

CITY COUNCIL STAFF REPORT

DATE: **July 28, 2015**

TO: **City Council/City Manager**

FROM: **Phil Wong, Director, Community Development Department**
By: Lisa Bobadilla, Transportation Division Manager

SUBJECT: **Resolution No. 2015-082 – Accepting Final Report for Community Engagement/Outreach Component of the Iron Horse Trail Bicycle/Pedestrian Overcrossing Project; and Reaffirming Conceptual Designs for Bicycle/Pedestrian Overcrossings at Bollinger Canyon Road and Crow Canyon Road (CIP 5530 and 5531)**

RECOMMENDED ACTION

Staff recommends the City Council adoption of Resolution No. 2015-082 accepting the final report for Community Engagement/Outreach component of the Iron Horse Trail Bicycle/Pedestrian Overcrossing project; and reaffirming conceptual designs for bicycle/pedestrian overcrossings at Bollinger Canyon Road and Crow Canyon Road.

BACKGROUND/DISCUSSION

The City secured the appropriation of $620,000 in Contra Costa Measure J Transportation for Livable Communities (CC-TLC) funding to initiate and complete the San Ramon Iron Horse Trail Bicycle/Pedestrian Overcrossing Project (Community Engagement/Preliminary Design); of which $200,700 was allocated to the Community Engagement/Outreach and Preliminary Design component.

With the completion of Phase One in 2009, the City embarked on Phase Two – Community Engagement/Outreach component. On November 12, 2013, Council approved Resolution No. 2013-102 – authorizing the Mayor to Execute a Contract between the City of San Ramon and Biggs Cardosa Associates, Inc. to implement the Community Engagement/Outreach and Preliminary Design for the Iron Horse Trail Overcrossing at Bollinger Canyon Road and Crow Canyon Road (CIP #5530 and 5531), in an amount not to exceed $200,700. Phase Two tasks have been completed, including:

- Established Project Development Team
- Initiated Site Evaluations
- Developed Public Outreach Campaign
- Implemented Community Design Charrettes
- Implemented Website/Online Survey/Social Media Campaign

AGENDA #4.14

- Solicited input from City Committees/Commissions/Stakeholders
- Developed Conceptual Bridge Alternatives

City Council Action – July 14, 2015

The City Council accepted the Community Engagement/Outreach Final Report and directed staff to advance two bridge concepts for Bollinger Canyon Road and one bridge concept for Crow Canyon Road for Environmental Analysis:

Bollinger Canyon Road:

- Cable-Stayed Single Mast Main Tower on south side of Bollinger Canyon Road; and
- Cable Stayed A-frame with tower on south side of Bollinger Canyon Road.

Crow Canyon Road

Tied Arch

FISCAL ANALYSIS

The Community Engagement/Outreach Component of the Project was funded with a CC-TLC grant in the amount of $200,700. There were no direct impacts to the City's General Fund. The next phase of the Project, Environmental Analysis is funded with Cycle 2 Priority Development Area (PDA) grant from the Metropolitan Transportation Commission (MTC), administered by the Contra Costa Transportation Authority. The City Council, on April 14, 2015 adopted Resolution No. 2015-018 approving Agreement PDA.9.SANR between San Ramon and Contra Costa Transportation Authority for $150,000 to conduct the Environmental Analysis for the Iron Horse Trail Bicycle/Pedestrian Overcrossings at Bollinger Canyon and Crow Canyon Road.

STEPS FOLLOWING APPROVAL

The Environmental Analysis Phase is scheduled to begin August 2015. At this juncture, there is sufficient information needed to initiate and complete the Environmental Phase. During the course of Environmental Analysis, Council will be provided with regular updates. A summary of the next steps, include:

- Initiate Kick-off meeting for Environmental Analysis (Phase Three) – August 2015;
- Finalize Environmental Analysis Scope of Work – August/September 2015;
  - Confirm alternatives to be studied, including length and width of bridge
  - Conceptual Layouts of Bridge Structure
  - Costs for each bridge structure and layout
- Advocate for grant funding for bridge construction through Contra Costa Transportation Expenditure Plan – fall 2015/winter 2016;
- Present Environmental Analysis updates to City Council – winter/summer 2016;
- Draft Environmental Analysis – spring 2016;

ATTACHMENTS

Attachment A:	Resolution No. 2015-082
Attachment B:	Bollinger Canyon Bridge – Option 1-A – Cable Stated Mast Main Tower – South Side;
Attachment C:	Bollinger Canyon Bridge – Option 1-A Cable Stayed A-Frame Main Tower/South Side; and
Attachment D:	Crow Canyon Road – Option 1 – Tied Arch.

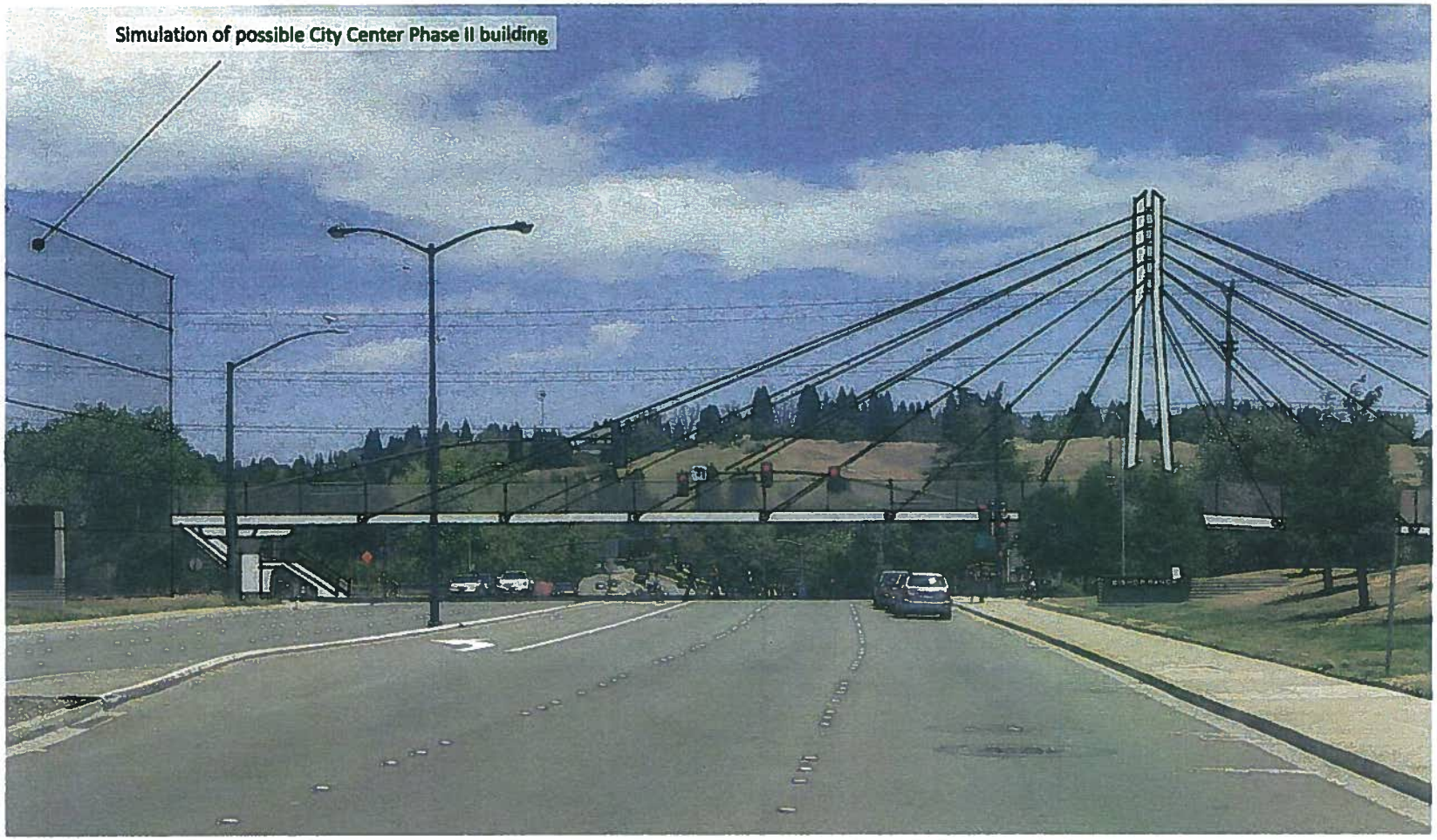
Bollinger Canyon Bridge – Option 1-A

Bollinger Canyon Road / Option 1-A – Cable-Stayed – Single Mast Main Tower / South – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Bollinger Canyon Bridge – Option 1-A



Bollinger Canyon Road / Option 1-A – Cable-Stayed – A-Frame Main Tower / South – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

Crow Canyon Bridge – Option 1

Crow Canyon Road / Option 1 – Tied Arch – looking east

IRON HORSE TRAIL

Bicycle / Pedestrian Overcrossings Conceptual Design

City Council
Resolution No. 2015-082

RESOLUTION NO. 2015-082

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN RAMON ACCEPTING FINAL REPORT FOR COMMUNITY ENGAGEMENT/OUTREACH COMPONENT OF THE IRON HORSE TRAIL BICYCLE/PEDESTRIAN OVERCROSSING PROJECT; AND REAFFIRMING CONCEPTUAL DESIGNS FOR BICYCLE/PEDESTRIAN OVERCROSSINGS AT BOLLINGER CANYON ROAD AND CROW CANYON ROAD (CIP #5530 AND #5531)

WHEREAS, in 2004, voters of Contra Costa approved Measure J, a ½ cent transportation sales tax program which includes funding for Countywide Capital and Maintenance Programs; and

WHEREAS, Measure J includes a program category titled Transportation for Livable Communities CC-TLC; and

WHEREAS, the CC-TLC program is intended to support local efforts to achieve more compact, mixed-use development focused on enhancing pedestrian and bicycling usage; improving overall bike/trails systems; and

WHEREAS, the CC-TLC program will fund specific transportation projects that facilitate, support and/or catalyze development, especially affordable housing, transit-oriented or mixed use development or encourage the use of alternatives to the single occupant vehicle and promote walking, bicycling and/or transit usage; and

WHEREAS, typical TLC investments include pedestrian, bicycle, and streetscape facilities, traffic calming and transit access improvements; and

WHEREAS, both planning grants ad specified transportation capital projects may receive funding through the TLC program; and

WHEREAS, in May 2012, the Contra Costa Transportation Authority approved the Programming Plan for the Measure J Transportation for Livable Communities funds for Fiscal Years 2012-15; and

WHEREAS, the City circulated a Request for Proposals to conduct Community Engagement/Outreach and Preliminary Design Services; and

WHEREAS, the City entered into an agreement with Biggs Cardosa Associates, Inc., to conduct the Community Engagement/Outreach and Preliminary Design services; and

WHEREAS, the Community Engagement/Outreach component is complete and a Technical Memo finalized; and

WHEREAS, Conceptual Designs for Bollinger Canyon and Crow Canyon Road overcrossings have been completed and will be carried forward into the Environmental Analysis Phase of the Project.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of San Ramon does hereby Accept the Final Report for Community Engagement/Outreach Component of the Iron Horse Trail Bicycle/Pedestrian Overcrossings Project; and Reaffirms Conceptual Designs for Bicycle/Pedestrian Overcrossings at Bollinger Canyon Road and Crow Canyon Road (CIP #5530 and #5531).

Bollinger Canyon Road:

Option 1-A: Cable-Stayed Single Mast Main Tower on south side of Bollinger Canyon Road; and Cable Stayed A-frame with tower on south side of Bollinger Canyon Road.

Crow Canyon Road

Option 1 – Tied Arch

PASSED, APPROVED, AND ADOPTED at the meeting of July 28, 2015 by the following votes:

AYES: *Cm. Hudson, O'Loane, Perkins, Sachs, and Mayor Clarkson*

NOES:

ABSENT:

ABSTAIN:

Bill Clarkson, Mayor

ATTEST:

Renee Beck, City Clerk

Media Alerts

San Ramon Iron Horse Trail Overcrossings Project

Frequently Asked Questions

1. What is the purpose of the Project?
   - 1a. To improve safety by eliminating conflicts between pedestrians/bicycles and vehicles;
   - 1b. Improve vehicular traffic flow by removing the at-grade crossings;
   - 1c. Reduce/eliminate jaywalking;
   - 1d. Enhance safety by providing an environment that encourages pedestrian and bicycle usage along the Iron Horse Trail; and
   - 1e. Increase trail use by nearby schools by improving safety at the Bollinger Canyon Road and Crow Canyon Road crossings.

2. What is the Project Schedule?
   - 2a. The Project consists of four phases:
     1. Phase One – Feasibility Study – Completed in 2009;
     2. Phase Two – Community Outreach and Preliminary Design – Currently underway and is expected to be completed in 2015;
     3. Phase Three – Environmental and Final Design – Anticipated to commence in 2015 but is highly dependent on grant funding; and
     4. Phase Four – Construction – Highly dependent on grant funding. When funding is available, could begin as early as 2017.

3. How much will construction cost?
   - 3a. Final costs have not yet been identified because the bridge type has not been selected. The Feasibility Study, completed in 2009, estimates construction costs ranged from $6M to $9M per overcrossing. A detailed preliminary cost estimate will be developed during the preliminary design phase. The costs are highly dependent on the type of bridge structure chosen.

4. Where is the money coming from?
   - 4a. For construction phase, the final sources of funding have not yet been identified. The City will apply for various grants and anticipates that the overcrossing(s) will be constructed with a combination of grant funding, including local grants (Measure J, Transportation for Livable Communities), State (Active Transportation Program), and Federal Tiger Grant will likely be submitted.

5. How will this project benefit me as a driver?
   - 5a. Less traffic signal delays translating to improvement in traffic circulation on Bollinger Canyon Road and Crow Canyon Road.

6. How will this project benefit me as a trail user?
    6a. The proposed overcrossings will separate vehicles from pedestrian and bicycles thereby providing safer access to either side of the street and no delays at the crossings.

7. What will happen with the existing at-grade crossings?
    7a. To be determined in final design phase. At this point it is desired to remove the at-grade crossings to eliminate conflicts between Bicycle/Pedestrian/Vehicles.

8. Who will make the final decision for the bridge architecture/type of overcrossings?
    8a. San Ramon City Council will have the final decision of the bridge architecture/type; however it will require consensus from East Bay Regional Park District (EBRPD) and Contra Costa County (CCC).

9. How many opportunities will residents have to comment/feedback?
    9a. There are 2 Design Charettes/Community Workshops (May 20 and June 9);
    9b. San Ramon Open Government Survey – On Line Survey – Fall 2014;
    9c. Survey at San Ramon Farmers Market – Fall 2014;
    9d. San Ramon City Committee Presentations (open to the public) – Fall 2014/Winter 2015;
    9e. San Ramon Stakeholder meetings – Fall 2014/Winter 2015; and
    9f. San Ramon City Council meetings (open to the public) – Fall 2014/Winter 2015 and Summer 2015.

10. Who should we contact for more information?
    - Lisa Bobadilla, San Ramon Transportation Division Manager
        i. 925-973-2651
        ii. lbobadilla@sanramon.ca.gov
    - Brian Bornstein, San Ramon City Engineer
        i. 925-973-2685
        ii. bbornstein@sanramon.ca.gov
    - Theresa Peterson, San Ramon Associate Engineer
        i. 925-973-2685
        ii. tpeterson@sanramon.ca.gov
    - Carrie Ricci, Iron Horse Trail Manager, Contra Costa County Public Works
        i. 925-313-2235
        ii. cricc@pw.cccounty.us
    - Jim Townsend, Trails Manager, East Bay Regional Park District
        i. 510-544-2602
        ii. jtownsend@ebparks.org

PHOTO: CREATIVE COMMONS/WIKIMEDIA

UPCOMING WORKSHOP:

Iron Horse Trail Overcrossings

Bring Your Ideas!

The Iron Horse Trail Overcrossings Project is looking for new ideas for overcrossing designs for Bollinger Canyon and Crow Canyon Roads in San Ramon. These new bicycle and pedestrian overcrossings will help improve overall safety and reduce delay for trail users and roadway users alike. We want your input – come give us your ideas!

Activities will include:

- Brainstorming
- Collaborative Map-Making
- Virtual Site Tour
- Visual Preference Survey

May 20, 2014

6:00-8:00pm

Fountain Room
San Ramon
Community Center
12501 Alcosta Blvd
San Ramon, CA 94583

For more information, visit
www.ci.san-ramon.ca.us

The Ironhorse Trail Overcrossings Project is a collaborative effort between the City of San Ramon, Contra Costa County, and the East Bay Regional Park District (which owns and maintains the Iron Horse Trail), and this phase is funded by Measure J sales tax revenue approved by voters in 2004. This project phase follows a 2009 study that identified conceptual improvement options for these locations, and will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for final design, environmental approval, and construction of the overcrossings.

NOTE: This meeting is being held in a wheelchair-accessible location. To request accessibility accommodation(s) to participate in the meeting, please contact the City Clerk 24 hours in advance of the meeting at 925-973-2539.

MEDIA ALERT

San Ramon Iron Horse Trail Overcrossings Community Workshop

For Immediate Release
Date: May 14, 2014

Contacts:

Lisa Bobadilla, San Ramon Transportation Division Manager
Phone: 925-973-2651
Email : lbobadilla@sanramon.ca.gov

Bring your ideas! The Iron Horse Trail Overcrossing Project is seeking conceptual ideas for overcrossing designs for Bollinger Canyon and Crow Canyon Roads in San Ramon. The proposed bicycle and pedestrian overcrossings will enhance safety and reduce delays for trail users and roadways users alike.

We want input from the community. A community work is scheduled for Tuesday, May 20, 2014 from 6:00 p.m. to 8:00 p.m. at the San Ramon Community Center – Fountain Room. Activities will include: Brainstorming, Collaborative map-making, Virtual Site Tour and Visual Preference Survey. An additional workshop is scheduled for Monday, June 9, 2014.

The San Ramon Valley Iron Horse Trail Bicycle Pedestrian Overcrossing Project is separated into three Phases. Phase I – the Corridor Concept Plan, has been completed, and included the City of San Ramon, East Regional Park District, Contra Costa County, Town of Danville, and Contra Costa Transportation Authority. Phase I evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclist and pedestrians. The Plan evaluated bridge concepts, feasibly, and potential costs.

The Iron Horse Trail Overcrossings Project – Phase II is a collaborative effort between San Ramon, Contra Costa County, and the East Bay Regional Park (which owns and maintains the trials). This phase is funded by Measure J ½ cent sales tax approved by voters in 2004. The Project Phase will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for Phase III - final design, environmental approval, and construction of the overcrossing.

MEDIA ALERT

Community Input
San Ramon Iron Horse Trail Overcrossings
Bollinger Canyon and Crow Canyon Road

For Immediate Release
Date: October 30, 2014

Contacts:

Lisa Bobadilla, San Ramon Transportation Division Manager
Phone: 925-973-2651
Email : lbobadilla@sanramon.ca.gov

Give us your ideas! The City of San Ramon is seeking input from the community on conceptual ideas for Bicycle/Pedestrian Overcrossings along the Iron Horse Trail at Bollinger Canyon Road and Crow Canyon Road in San Ramon. The proposed bicycle and pedestrian overcrossings will enhance safety and reduce delays for both trail and roadway users alike.

Submit your comments to **"Open San Ramon"** by visiting the City's website www.sanramon.ca.gov. The online survey will be available October 30, 2014 through November 26, 2014.

About the Project
The San Ramon Valley Iron Horse Trail Bicycle Pedestrian Overcrossing Project is separated into four phases. Phase I – the Corridor Concept Plan, has been completed, and included the City of San Ramon, East Bay Regional Park District, Contra Costa County, Town of Danville, and Contra Costa Transportation Authority. Phase I evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclist and pedestrians. The Plan evaluated bridge concepts, feasibility, and potential costs.

The Iron Horse Trail Overcrossings Project – Phase II is a collaborative effort between San Ramon, Contra Costa County, and the East Bay Regional Park District, which owns and maintains the trail. This phase is funded by Measure J, the Contra Costa half cent sales tax approved by voters in 2004. Phase II will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for Phase III - environmental approval and design. Phase IV (construction) is anticipated to take place following environmental approval and pending grant funding.

MEDIA ALERT

Community Input
San Ramon Iron Horse Trail Overcrossings
Bollinger Canyon and Crow Canyon Road

For Immediate Release
Date: December 8, 2014

Contact:

Lisa Bobadilla, San Ramon Transportation Division Manager
Phone: 925-973-2651
Email : lbobadilla@sanramon.ca.gov

Give us your ideas! The City of San Ramon is seeking input from the community on conceptual ideas for Bicycle/Pedestrian Overcrossings along the Iron Horse Trail at Bollinger Canyon Road and Crow Canyon Road in San Ramon. The proposed bicycle and pedestrian overcrossings will enhance safety and reduce delays for both trail and roadway users alike.

Submit your comments to "**Open San Ramon**" by visiting the City's website www.sanramon.ca.gov. The online survey has been extended to December 31, 2014.

About the Project
The San Ramon Valley Iron Horse Trail Bicycle Pedestrian Overcrossing Project is separated into four phases. Phase I – the Corridor Concept Plan, has been completed, and included the City of San Ramon, East Bay Regional Park District, Contra Costa County, Town of Danville, and Contra Costa Transportation Authority. Phase I evaluated the feasibility of constructing overcrossings to improve access and safety for bicyclist and pedestrians. The Plan evaluated bridge concepts, feasibility, and potential costs.

The Iron Horse Trail Overcrossings Project – Phase II is a collaborative effort between San Ramon, Contra Costa County, and the East Bay Regional Park District, which owns and maintains the trail. This phase is funded by Measure J, the Contra Costa half cent sales tax approved by voters in 2004. Phase II will include a number of public outreach and design activities throughout 2014 and into early 2015. Once completed, the City anticipates seeking additional grant funding for Phase III - environmental approval and design. Phase IV (construction) is anticipated to take place following environmental approval and pending grant funding.

MEDIA ALERT

Community Input
San Ramon Iron Horse Trail Overcrossings
Bollinger Canyon and Crow Canyon Road

For Immediate Release
Date: February 4, 2015

Contact:

Lisa Bobadilla, San Ramon Transportation Division Manager
Phone: 925-973-2651
Email : lbobadilla@sanramon.ca.gov

Give us your ideas! The City of San Ramon is seeking input from the community on conceptual ideas for Bicycle/Pedestrian Overcrossings along the Iron Horse Trail at Bollinger Canyon Road and Crow Canyon Road in San Ramon. The proposed bicycle and pedestrian overcrossings will enhance safety and reduce delays for both trail and roadway users alike.

Learn more about the Project and Submit your comments to "**Open San Ramon**" by visiting the City's website www.sanramon.ca.gov. The online survey is available until April 7, 2015.

On-Line Survey

Online Survey

Introduction:

The City of San Ramon is currently studying a proposed bicycle and pedestrian overcrossing along the Iron Horse Trail at Bollinger Canyon Road. A feasibility study conducted in 2009 identified this overcrossing as an important connection to improve accessibility, safety, and traffic operations.

Online Survey

The purpose of the project is to:

1. Improve safety by eliminating conflicts between pedestrians, bicyclists, and motorists;
2. Improve motor vehicle circulation by removing the at-grade crossings;
3. Reduce and eliminate unsafe crossing maneuvers by pedestrians and bicyclists;
4. Enhance safety by providing an environment that encourages walking and bicycling along the Iron Horse Regional Trail; and
5. Increase trail usage by improving the comfort at the Bollinger Canyon Road crossing.

The existing Iron Horse Regional Trail crossing at Bollinger Canyon Road aligns with a cross street at a T intersection. The crossing makes use of the signalized intersection, with bicyclists and pedestrians on the Iron Horse Regional Trail pushing a button at the signal and then proceeding in the crosswalk during the WALK phase.

In the current phase of the overcrossing study, the City and their consultant team are gathering input from community members and trail users on potential alignments and configurations for the Bollinger Canyon overcrossing and whether to maintain the at-grade crossing facility, and the design aesthetic for the location.

Please download the technical memo for a visual tour of the project and click on the POST button below to share your thoughts with the City.

Online Survey

Bridge Type:
Concrete deck on steel members supported by steel arches

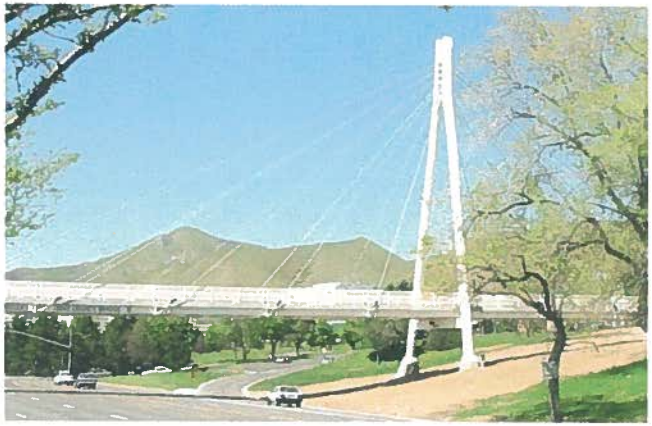
Colors:
White-painted steel, galvanized (grey) barriers and fences

Bridge Type:
Concrete deck on steel members supported by combination of three overlapping steel arches

Special Feature:
Partial coverage by stretched fabric architectural roof

Colors:
Grey-painted steel (arches and barriers), white roof

Online Survey



Bridge Type:
Steel single tower cable-stayed main and secondary spans, supporting concrete deck on steel members

Special Feature:
Architectural lighting of cables and tower

Colors:
White-painted steel (tower, deck frame, safety barriers), grey concrete support elements and steel cables

Bridge Type:
Concrete deck on steel members supported by steel prefabricated truss

Colors:
Brown-painted steel truss, white-painted handrails

Online Survey

Bridge Type:
Concrete box girder below concrete deck

Special Feature:
Partial coverage by steel roof structure

Colors:
Cream-painted concrete (girder, deck, supporting columns), red-painted steel (railings, roof structure)

Bridge Type:
Concrete deck on steel members supported by steel Virendeel truss, supported on concrete piers

Special Feature:
Ornate architectural detailing

Colors:
Teal-painted truss and ancillary architectural details, tan-colored concrete surfaces

Online Survey

Bridge Type:
Concrete deck on steel members supported by circular steel tied arches

Special Feature:
Glass curtain walls integrated with deck support cables

Colors:
Light blue-painted steel (arches and deck frame)

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Applied arch-shaped panels, ornate architectural details

Colors:
Tan-colored concrete (pier structure), rubble stone-finished concrete (bridge spans)

Online Survey

Bridge Type:
Concrete box girders below concrete deck, supported on concrete piers

Special Feature:
Partial coverage by steel and glass roof structure

Colors:
Tan-colored concrete (bridge girders and piers), blue-painted steel (roof structure)

Bridge Type:
Concrete deck on steel members supported by tubular steel tied butterfly arches

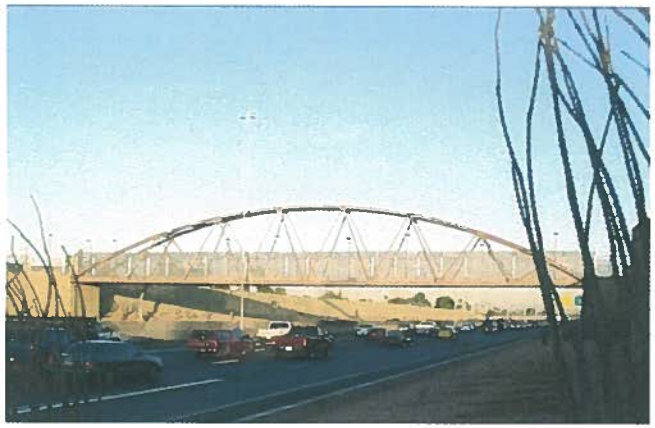
Special Feature:
Architectural all-glass elevator

Colors:
Orange-painted arches, white-painted deck and railings, green-tinted glass elevator, grey concrete (structural supports, stairs)

Online Survey

Bridge Type:
Concrete deck supported by concrete arch-shaped box girder

Colors:
Grey-colored girder and railing supports, tan-colored deck, rubble stone-finished abutment piers



Bridge Type:
Concrete deck on steel members supported by prefabricated steel arch-shaped truss

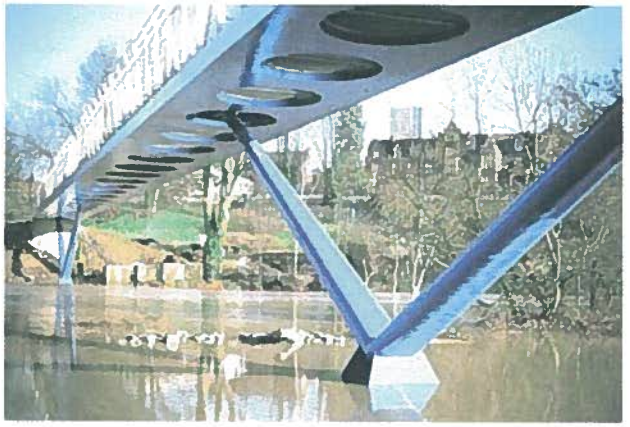
Colors:
Salmon-painted steel (truss and deck frame), galvanized (grey) railings and fences

Online Survey

Bridge Type:
Wooden deck on supporting structure

Special Features:
Sinuous deck, curvilinear aluminum cladding, bridge as "sculpture"

Colors:
Brown-stained wood deck, grey-silver colored steel panels, brushed aluminum "shingles"



Bridge Type:
Deck supported by shallow steel continuous through-girder, supported on triangulated steel struts

Special Features:
Glass deck with views to water through circular openings in steel through-girder

Colors:
Blue-painted steel (through-girder, struts), transparent glass deck

Online Survey

Bridge Type:
Steel deck supported by steel triangular-shaped truss girders

Special Features:
Architecture shaped to resemble a grasshopper

Colors:
Light red-painted steel (truss girders), grey-painted (or galvanized) steel (barrier frames, railings, added architectural features)

Bridge Type:
Concrete deck supported on concrete box girders, supported by concrete piers

Special Features:
Chain-link screen roof shaped with peaks to resemble mountain range

Colors:
Grey-colored concrete (deck, girders, piers), grey (or galvanized) fencing and screen roof

Online Survey

Bridge Type:
Steel girder bridge with concrete deck

Special Features:
Water drop shaped railing

Colors:
Salmon color paint

Bridge Type:
Integral concrete deck on curved steel box girder, supported by concrete piers

Special Features:
Deck lighting features integrated in steel railing supports

Colors:
Grey-colored steel (girder, railing frames and infill), grey-colored deck surface

Online Survey

Bridge Type:
Steel girder bridge

Special Features:
Open tube look with low railing

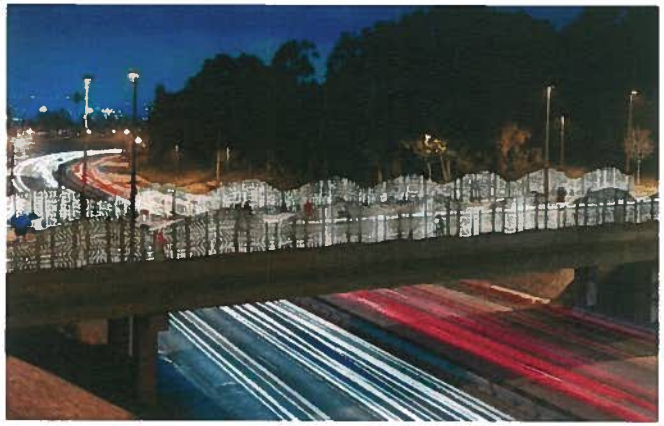
Colors:
Light brown

Bridge Type:
Concrete deck supported by concrete box girders, supported by concrete piers

Special Features:
Covered by colored wave-form screen roof

Colors:
Tan-colored concrete (deck, girders, piers), red-painted steel (screen roof), grey-painted (or galvanized) steel (roof support frames, barrier infill)

Online Survey



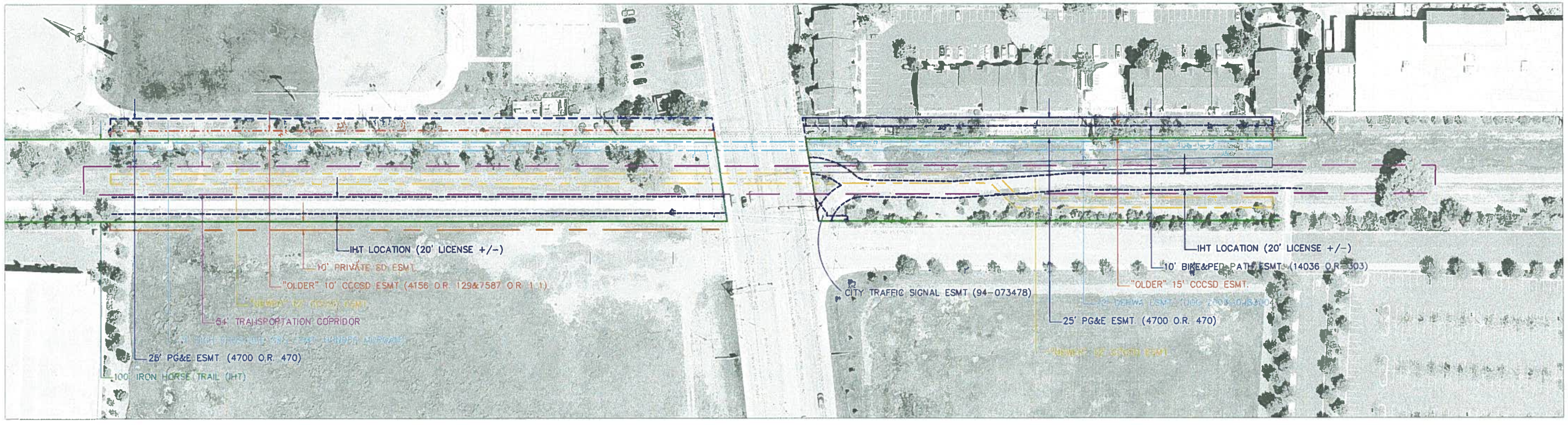
Bridge Type:
Concrete deck, supported by concrete precast beams, supported by concrete piers

Special Features:
Architectural railing shapes and light fixtures

Colors:
Tan-colored concrete (deck, beams, piers)

Background Mapping

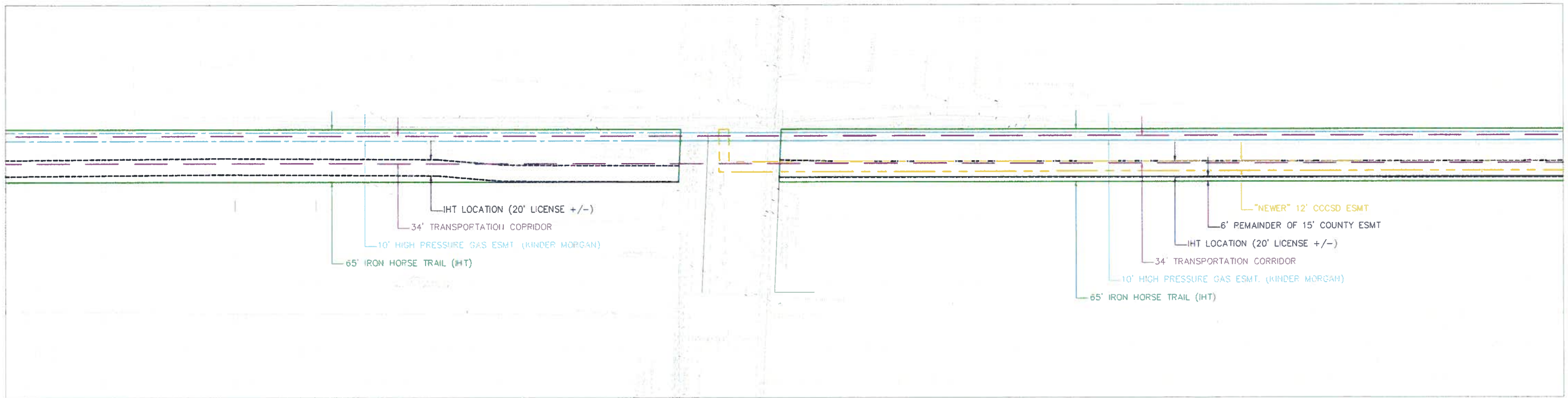
IRON HORSE TRAIL - POC BOLLINGER CANYON



369

BkF ENGINEERS SURVEYORS PLANNERS
100 YEARS

IRON HORSE TRAIL - POC CROW CANYON

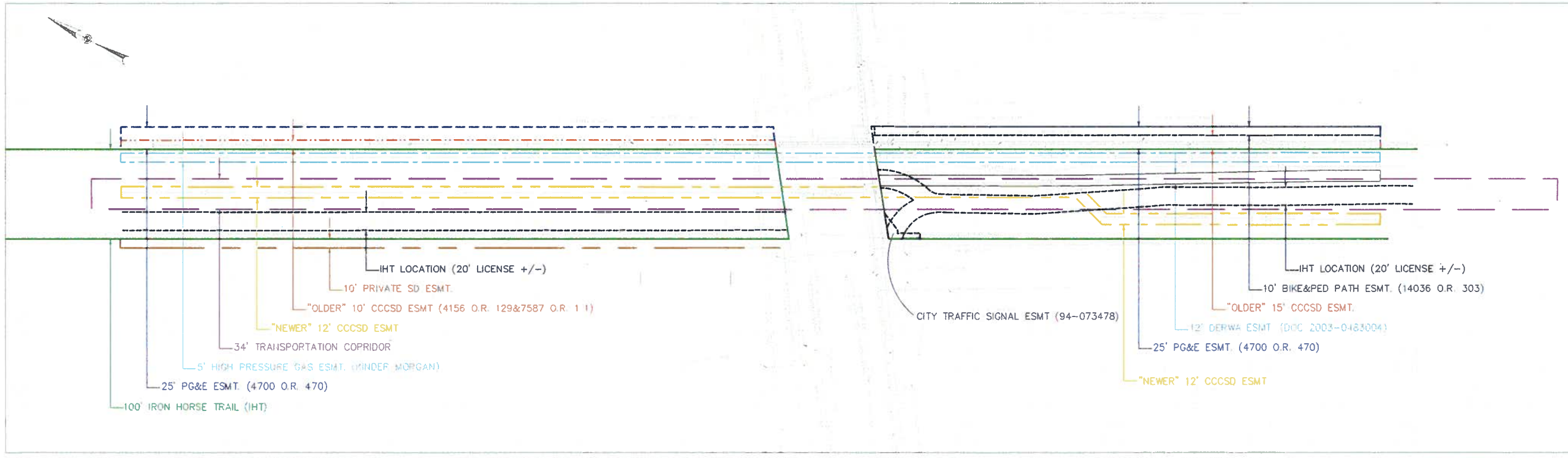


BkF ENGINEERS SURVEYORS PLANNERS
100 YEARS

IRON HORSE TRAIL - POC CROW CANYON

BkF 100 YEARS ENGINEERS SURVEYORS PLANNERS

IRON HORSE TRAIL - POC BOLLINGER CANYON



BkF ENGINEERS SURVEYORS PLANNERS
100 YEARS

Bollinger Canyon Road Utilities

Crow Canyon Road Utilities