Safe Routes to School provides funding for projects that construct facilities to enhance the safety for pedestrians and bicyclists. By enhancing the safety of the pathways, trails, sidewalks, and crossings, the likelihood of attracting and encouraging additional students to walk and bike increases. This could be utilized for trail improvements where there are logical connections to local schools.

Partnership, Statewide, and Transit Planning grants for improvements to the state or regional transportation system.

Community-Based Transportation Planning grants focus on integrated land use and transportation planning, including alternative transportation methods. Pedestrian and bicycle trails to link neighborhoods and transit centers would be applicable, at either end of the trail.

The Environmental Enhancement and Mitigation Program (EEMP) was established by the Legislature in 1989. It generally offers a total of $10 million each year for grants to local, state, and federal governmental agencies and to nonprofit organizations for projects to mitigate the environmental impacts caused by new or modified state transportation facilities. State gasoline tax monies fund the EEMP. Grants are awarded in three categories:

- Highway Landscape and Urban Forestry– Projects designed to improve air quality through the planting of trees and other suitable plants.
- Resource Lands – Projects for the acquisition, restoration, or enhancement of watersheds, wildlife habitat, wetlands, forests, or other natural areas.
- Roadside Recreational – Projects for the acquisition and/or development of roadside recreational opportunities.

Transportation Funds for Clean Air Program (TFCA). The Bay Area Air Quality Management District (BAAQMD) provides funding for projects consistent with BAAQMD's Clean Air Plan. Projects must demonstrate that they result in air quality benefits. Automobile registration fees generate funds, with approximately $20 million collected annually. These funds are distributed to either a regional competitive fund (60%) or to a Program Manager Fund (40%).

Regional Bicycle and Pedestrian Program (RBPP). The RBPP program has committed $200 million dollars towards funding significant bicycle and pedestrian projects, particularly those that serve schools or transit, and is managed through the applicable transportation agency (such as ACTIA).

Wildlife Conservation Board funds the acquisition of lands or improvements that preserve wildlife habitat or provide recreational access for hunting, fishing or other wildlife-oriented activities. Projects eligible for funding include interpretive trails, river access, and trailhead parking areas. The State of California must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases of each project. Property acquired or developed under the program must be retained in perpetuity for public recreational use.

California Conservation Corps (CCC). Local, state and federal agencies as well as non-profit organizations may contract with the CCC. The CCC does not provide funding, but is a low cost source of labor. Some grants require the inclusion of CCC labor as a project component.

Federal Funding Programs

Since many of the lands within the Study Area are within the Don Edwards Wildlife Refuge, it is conceivable that trails can be implemented as part of ongoing restoration and public access improvements in conjunction with implementation of the Comprehensive Conservation Plan 2012. Since this plan is intended to serve as a guide for project implementation within the next 15 years, integration of Bay Trail segments that fall within Refuge lands will be a key to an integrated trail system.

Projects within the CCP will be integrated into the Refuge annual budget, or may be implemented in full or in part by other sources, such as partnerships with other local, state, or federal agencies, special legislative appropriations, or grants (i.e., National Fish and Wildlife Foundation, Transportation Enhancement Funds). Other potential sources of funding for restoration projects include: the North American Wetlands Conservation Act Grants Program; and the Cooperative Endangered Species Conservation Fund.

Land and Water Conservation Fund (LCWF). LCWF provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Administered by the National Parks Service and the California Department of Parks and Recreation, it has been reauthorized until 2015. Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and are reimbursed for 50 percent of costs.

MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141). This program was signed into law on July 6, 2012, funding surface transportation programs at $105 billion for fiscal years (FY) 2013 and 2014, This program created a streamlined, performance-based, and multimodal program for highways, streets, roads, transit and other transportation related projects. A focus of the program is to streamline work done by the Federal Highway Administration to ensure that local communities are able to build multimodal, sustainable projects ranging from passenger rail and transit to bicycle and pedestrian paths.

Project funding for bicycle and pedestrian projects will be from the Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities previously funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU.

9. NEXT STEPS

Implementation of the Bay Trail within Newark and Fremont will be a multi-step process, involving:

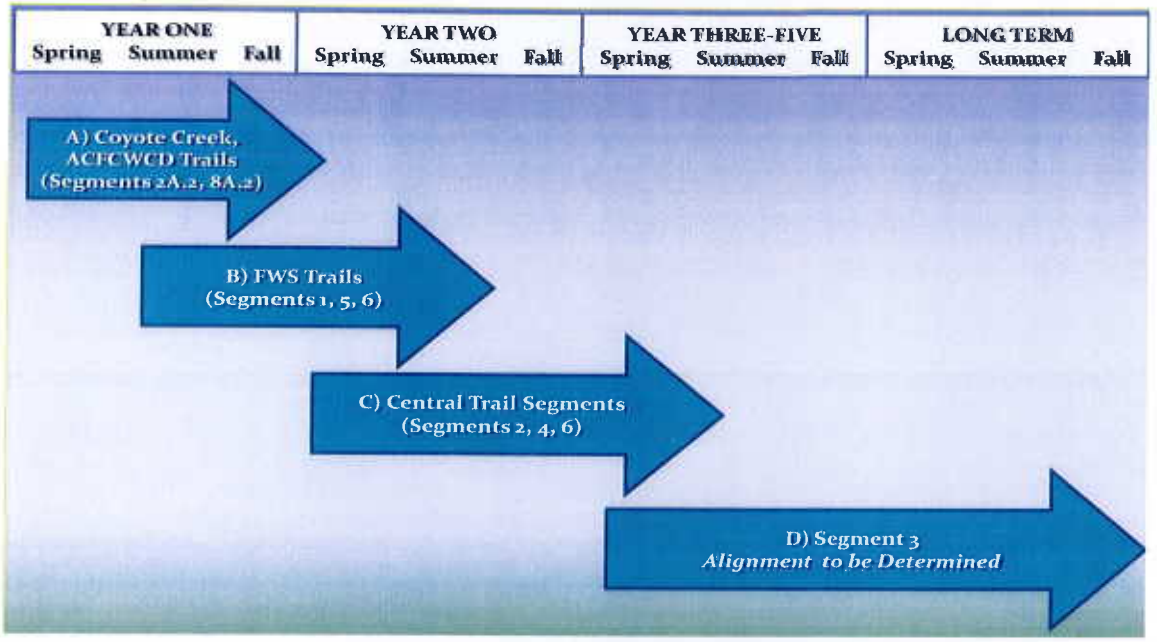
- Review and/or approval of Feasibility Study by lead agencies and project stakeholders
- Integration of plan concepts into applicable Plans of lead agencies (City and County bicycle and pedestrian plans)
- Identification of individual projects, programming funds for project implementation
- Completion of the required environmental review document(s) (CEQA/NEPA)
- Securing funds for preliminary design and construction
- Obtaining regulatory permit approvals
- Negotiation and completion of potential Right of Way (ROW) and trail use or licensing agreements
- Preparation of detailed engineering design plans
- Publically bidding the project's Construction Plans
- Construction oversight of the approved plans by a qualified Contractor to ensure that the project plans, along with all of the CEQA/NEPA mitigation measures and all permit conditions, are followed and implemented as approved.

The following steps outline the near-term process for trail planning.

9.1 PROJECT REVIEW AND APPROVAL

The study report, including alignment recommendations, will be presented to the cities of Newark and Fremont for consideration. The report should also be submitted to agencies such as USFWS, ACFCWCD, and possibly EBRPD for review. Where appropriate, this Plan would be integrated with ongoing planning efforts of each agency as part of a coordinated implementation effort (USFWS CCR). As a planning document, CEQA review would not be required at this time.

As discussed previously, a potential implementation sequence would envision completion of priority projects and gaps between existing trails segments, such as an interim connection between Fremont Blvd. and Dixon Landing Road, which will bridge a significant gap and connect two existing Bay Trail segments. Another priority would be to complete the segments within USFWS lands that are being adapted to wildlife use, west of Cushing Parkway, to provide a connection to Auto Mall Parkway. Segments within Specific Plan areas would be completed as those projects are implemented.



9.2 CEQA/NEPA CONFIRMATION

As a planning study, this Study itself is exempt from CEQA review. Initially, the Study can be presented to the City Councils (and other decision-making entities) as an informational item, with a request for direction to proceed with any follow-up technical or environmental studies, apply for grants and other sources of funding, and completion of planning/engineering and environmental review.

As noted above, an environmental analysis needs to be conducted per California Environmental Quality Act (CEQA) requirements prior to any project construction. A CEQA Initial Study Checklist must be prepared to determine if there are potentially significant environmental impacts. If there are potential impacts, then an expanded environmental assessment will be prepared, most likely focusing on specific project issues. Mitigation measures may be incorporated into the project design (such as fencing, separation or other measures) to reduce the potential environmental impacts. The public will have several opportunities to review and comment on the project and potential impacts in this process.

If the project receives federal funding, then environmental review will also need to comply with National Environmental Policy Act (NEPA) guidelines. Typically, a number of special technical environmental studies are conducted to assist in the NEPA review and approval process. These often include:

- Section 106 Cultural Resources Study;
- Section 4f determination, if any parks are located nearby that might be closed due to construction activities;
- Location Hydraulic Study, for segments within FEMA designated 100-year floodplain;
- Natural Environment Study (NES)- wetlands delineation, if there are any wetlands present;
- Biological Assessment to verify presence and protection protocols for sensitive wildlife and plant species that might be impacted by project activities.

If the environmental review and special studies identify feasible mitigation measures that adequately address potential project impacts, then a Mitigated Negative Declaration can be adopted by the lead agency, and a Finding of No Significant Impact (FONSI) can be adopted by federal agencies (if applicable).

For any elements of the trail that involve minimal disturbance and construction, such as striping, signage, a project may be eligible for consideration of a Categorical Exemption or Exclusion (NEPA), provided there are no water quality, wetlands, endangered species, or cultural resources impacts. However, a focused or full EIR/EIS could be required if any significant environmental issues are identified during the Initial Study.

Trails identified on USFWS lands that are incorporated into the USFWS CCR could be evaluated as part of the NEPA review for that Plan. Local (Don Edwards Wildlife Refuge) biologists could provide the Section 7 consultation and write the Biological Opinion if the trail is on their refuge lands.

Portions of the trail will be completed in association with other projects (Areas 3 and 4, Dumbarton TOD, Creekside Landing, etc) and construction of physical features for the trail should be included in those respective environmental documents.

9.3 RIGHT OF WAY AGREEMENTS

Separate agreements would be needed with each landowner or easement holder within a trail segment. Continued dialogue with respective property owners and stakeholders (Cargill, Inc., ACFCWCD, etc.) will be critical to incorporate trail elements into current and planned projects where appropriate. Right of way negotiations will likely include provisions for wayfinding, security, maintenance and operations, including the need for periodic closure.

9.4 PROJECT PERMITTING

Preparation of permit applications and requests for permit approvals from applicable regulatory agencies is typically completed concurrent with engineering design. Typically, permitting can often be completed on well thought-out conceptual (35% submittal) plans. Many trail segments will likely be subject to permit and review associated with proximity to sensitive habitat areas. This will need to be confirmed in follow-up discussions with regulatory agencies. Corps and DFG permits may be required for any localized wetlands fill associated with bridge, boardwalk, or culvert structures.

9.5 FINAL DESIGN

The design process can often proceed at the same time the environmental review work is being completed. Next steps may include topographic, property or boundary and ROW/easement surveying, review of "as-built" drawings, completion of soil borings for pavement and boardwalk/bridge design, and preliminary trail design. Typically a design proceeds through several stages of preparation and review, from concept drawings to a final construction bid package (i.e., 35% completion, 70% completion, and 95% completion review and submittals). Depending on complexity, the completion of a final design and bid package, followed by public bidding, can take from six to more than twelve months.

9.6 TRAIL CONSTRUCTION

Depending on size and complexity, trail construction can take from two or three to eight or more months to complete. Trail implementation can also be completed in phases, depending upon prioritization, available funding, environmental requirements, permitting, or combined with other construction projects. The project may also be subject to seasonal implementation restrictions to avoid impacts to wildlife resources during nesting or breeding season.

Construction of the Newark-Fremont Trail system will likely be phased over many years to reflect available funds for implementation, as well as obtaining necessary ROW, private agency cooperation, and coordination with property owners. Construction protocols and Best Management Practices identified in Section 7 as well as required as part of environmental review will be incorporated into the construction project documents.

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Appendix A

Meeting Notes and Correspondence

COMMUNITY WORKSHOP
NEWARK – FREMONT BAY TRAIL GAP FEASIBILITY STUDIES

June 13, 2011 Silliman Community Center
Meeting Notes

The Newark Fremont Bay Trail Gap Feasibility Study Community Workshop #1 was held on June 13, 2011. Approximately ten area residents attended, including representatives from Newark and Fremont, representatives of elected officials, and neighborhood residents.

Patrick Miller introduced the project, which is a feasibility study to identify a new, shore-line oriented Bay Trail route between Highway 84 and the Santa Clara County/Milpitas limits (near Newby Landfill). The feasibility study is a long-term plan that will identify potential routes for an "optimum" alignment, recognizing that the area is in transition, with large areas to be redeveloped (Dumbarton TOD and Areas 3 and 4 Specific Plan), vacant lands and some areas in permitting and development (Tri Cities Landfill and Creekside Landing). The Study will evaluate wildlife habitat considerations, land use, property ownership, and other considerations as part of the decision-making process. Within the Study Area, the consultant team is also studying detailed options for an interim trail alignment to bridge the Bay Trail gap between the south end of Fremont Blvd. and Dixon Landing Road, on King and Lyons property. Discussions with individual property owners, including Cargill and US Fish and Wildlife Service, are part of the study.

Jeff Peters of Questa presented an overview of the study, including existing conditions and preliminary segments to be evaluated. Some of the project issues include getting feedback from property owners about where to site a trail to avoid operational conflicts, such as the Tri Cities Landfill. Each segment will be evaluated utilizing common criteria to determine how it meets the project goals.

Questions and comments from workshop participants:

1. What is the Cost difference between Segments 1A and 1B?

   Trail segment costs will be developed as part of the planning and decision-making process, including information regarding right of way acquisition as well as actual construction costs.

2. Comment: The trail should not be located on Cherry Street. The street is uncomfortable for a tentative cyclist with issues regarding sight, balance, speed etc. Being away from traffic should be the #1 criteria.

3. Is the Bay Trail for recreation or transportation?

   The Bay Trail can serve both uses, it is a multiuse facility, and depending on the alignment segments could serve one or both types of users.

4. Have the two cities provided guidance with respect to their bike planning?

Fremont is currently updating their Bicyde and Pedestrian Plan, and Newark is preparing its first Plan. The Bay Trail route will be coordinated so that connections and links to citywide facilities are consistent.

5. The area west of the freeway provides little connection to businesses. How do the Plans mesh?

   The Bay Trail can provide opportunities for recreation oriented wildlife observation, or in some areas, transportation based connections. In this area, the goal is to provide a shoreline experience, so in some areas the transportation route would be located elsewhere.

6. Would the trails be developed in sections?

   Yes, the Bay Trail is typically built in sections, depending on adjacent land use/development and funding availability. For instance, the Bay Trail within the Study Area will likely be built as part of the project at Dumbarton TOD, Areas 3 and 4 Specific Plan, and the Creekside Landing/King and Lyons project. Trail improvements might be required as part of the Tri Cities landfill project.

7. There is a landscaped berm on Cherry Street. Could it be redesigned as a Bay Trail?

   Cherry Street is not ideal, due to traffic and location away from the Newark shoreline. It could be considered for an interim alignment. Considerations for redesigning it as a multiuse path would be the right of way width, traffic conditions, and cost to realign the street, sidewalk, curbs and other elements.

8. What feedback have you received from Alameda County Flood Control regarding use of levees and sea-level rise?

   We have contacted the ACFCWCD and will seek input regarding this issue. There are similar studies that are looking at levee construction and trails, such as ABAG/NOAA "Adapting to Rising Tides" for the Hayward-Union City area, as well as studies in Santa Clara County. There has been no long term planning in the Newark Fremont area by these agencies.

9. Comment: The US Army Corps of Engineers omits the levees around Cargill from their studies, as these levees are privately maintained.

10. Is this the first workshop?

    This study (as well as the Coyote Creek Study and Alameda County Bike Plan) was discussed at the May 18, 2011 Fremont BPTAC meeting, which was attended by about fifteen people.

11. What is the purpose of the Coyote Creek Study? Why build this segment?
    The Coyote Creek study evaluates the specific alignment for an interim trail, including a pedestrian bridge over Scott Creek/Line B to close a gap in the Bay Trail between the end of Fremont Blvd. and Dixon Landing Road. Due to the economy, this development may not be built in the near future, and this trail segment would connect two existing Bay Trail segments.

MEETING NOTES
FREMONT BICYCLE PEDESTRIAN TECHNICAL ADVISORY COMMITTEE

May 18, 2011, 6:00 PM

The Newark Fremont Bay Trail Gap Feasibility Study (Gap Study) was Item # 2 on the Fremont Bicycle Pedestrian Technical Advisory Committee agenda.

The first agenda item was a review of the draft ACTIA Alameda County-wide Bicycle and Pedestrian Plans. The committee and public reviewed the ACTIA draft County Bike/Ped Plan, and added comments and annotations. This draft Plan shows a loop trail (on both the bike and pedestrian plans) running down Line N and Mowry Slough west of the Tri Cities landfill, connecting to Coyote Creek and looping south toward Newby Island. Diane Stark (County Planner) was asked what she knew about this trail segment, and she replied that she did not recall any specific details of the alignment and requested further coordination with the Gap Feasibility Study team.

(Note: further research is needed on this issue; depending on what is found out- the study team should consider adding this route to draft Gap Trail Study alignment map and assign it a segment number-for consistency with the County planning effort.)

Jeff Peters (Questa) summarized key points of the two related Bay Trail Projects (Newark- Fremont Bay Trail Gap Feasibility Study, and an in-depth study of the Coyote Creek project area). Patrick Miller was the moderator/facilitator and helped respond to questions from the committee and general public that were present. Questions asked during the PowerPoint presentation and during a Q&A session after the presentation, along with responses by Peters and Miller, are summarized as follows:

1. Question was raised on need to design Bay Trail on existing low elevation levees to be above the 100-year flood and accommodate sea level rise.

   Response was the trail surface elevation does not necessarily need to be above the 100-year base flood level, and/or accommodate sea level rise, but all bridges crossing sloughs that are maintained by Alameda County Flood Control District will very likely need to be a foot or more above this. The concern is that the bridges could block flood flows coming down the sloughs and drainage channels, including causing debris jambs and creating local flooding or levee breaks. This will likely need to be worked out on a case by case basis during any future project design level investigations. Some ramping up of the trail surface will need to occur to accommodate increased heights needed to transition to bridge elevations.

   It was pointed out that some of the levees are privately owned (i.e. Cargill, and some owned by USFWS and managed by Cargill. These levees are not designed or operated for flood control (they are not FEMA certified). Local, state, and federal emergency response providers, including FEMA, Corps, County Flood Control District, are in the process of looking at levee heights and conditions, and a part of their mission in the future may also include considering needs for public levee construction in places to mitigate sea level rise issues. Having a general Bay Trail designation on City and County

planning documents along the South San Francisco Bay shoreline may help in the future to make sure that any new levees are multi-purpose, including a possible recreational hiking component.

2. Follow up question was asked regarding construction of under-passes or over-passes over railroad tracks, as several new grade separated pedestrian/bike bridges are shown on the draft trail study segment plan.

   Response was that in general because of the flat terrain, poor soils, and high groundwater conditions, an over-pass structure would likely be more feasible and cost effective. Typically such structures need to be a minimum of 23.5 feet over railroad tracks, so very long ramps are need to meet the ADA maximum grade requirement of 5%.

3. Question was raised about levee conditions and levee stability.

   Response was that the levees are old and not well engineered; they are constructed of soft bay mud dredge material, placed on bay mud. They are subject to differential settlement, erosion, etc. and require periodic "topping" and shoring or beaching for erosion control. Having a paved trail surface under these conditions is challenging, and the study team is looking at alternative surfacing materials, such as polymer stabilized fine gravel aggregate.

4. Question was raised on the possibility of running the trail alignment along side or just outside of the Union Pacific railroad alignment, especially through the Cargill property.

   The current Bay Trail Plan map for this area shows a study alignment running parallel to the UP tracks as "Planned Bay Trail- Future Route- Not Developed".

   Response was that the study team looked into this issue and discussed this alignment with representatives of Cargill and Alameda County Flood Control District. The alignment is highly constrained by properties that abut the UP alignment, including a flood control ditch and salt pond system adjacent to the Cargill property, and Cargill representatives thought it not feasible, that there was no room and a trail in close proximity would interfere with their operations. It was also pointed out that it is highly unlikely that there is extra/unused Right of Way within the UP railroad property as UP typically reserves any extra ROW for future tracks expansion, especially on busy rail corridors within metropolitan areas- such as the ACE corridor.

   A member of the audience pointed out that this area is really near the heart of Cargill's salt production operations, while someone else suggested the possibility of buying and reconstructing some of the salt pond's eastern side to make room.

(Note: draft trail study segment plans do not currently show trail along rail corridor, but

perhaps the plan maps should show a study alignment, so it can be formally evaluated, and documented for the record as being feasible or not.

5. Question was asked: Who funds the Bay Trail (suggesting that it was a Bay Trail Project)?

   Response: While the ABAG Bay Trail program occasionally does administer grant programs to plan and help construct the trail, local jurisdictions most often take the lead in funding and oversight for construction and then provide ongoing operations and management. Funds are sometimes committed from the State Coastal Conservancy.

6. Question: How much use will the trail get, will there be any use projections associated with the segments being considered?

   Response: Developing actual trail use estimates was not currently anticipated but potential usability could be considered evaluation criteria for comparing alternatives. . Generally, most segments of the Bay Trail near populated areas, once constructed, are extremely well used, especially on weekends. Audience members attested to that fact.

7. Comment from Stakeholder present. Dan North from Waste Mgt. Tri Cities landfill spoke regarding the two trail segments that are located on landfill property (the study alignment on the toe maintenance road, and an alignment through possible wetlands along the common UP fence line). Dan indicated that Waste Management welcomed the Bay Trail on their property and welcomed the opportunity to continue to work with the Gap Study team to help select a feasible route. Dan pointed out that he did not think a trail alignment would work along the toe of the landfill and existing maintenance access road. The road is currently 15 feet wide, but he said they need to add 3 or 4 feet of cap to the above landfill slopes, which would narrow the road to 12 feet. He indicated that they have pick-ups on the road daily and will for the next 30 years (the landfill post closure monitoring period) and that in their opinion there was not enough room for a truck and trail users passing.

   Dan offered as an alternative route the stormwater/wetlands area- with a boardwalk. (Note: it is possible that under NPDES regulations this is a managed stormwater pond which might not technically classify as a Corps of Engineers jurisdictional wetlands as the divert all landfill runoff to this area then release it. If it is active stormwater facility- it may not be a wetland.)

   (Note: Dan also mentioned that coordinating on Bay Trail planning has been placed as an issue to resolve in their landfill Use modification permit application and General Plan amendment application with the City- so continued coordination on this issue with City planning staff will be required.)

   Dan also mentioned the City wants a sidewalk/ped crossing of the railroad tracks; this also needs further investigation, as CPUC may require grade separation at this current Private crossing.

Fremont BPTAC March 21, 2012

Meeting Notes

1. Members of the public included representatives of the CSD Wheelers, a group from California School for the Deaf with 65 members.

2. Coyote Creek Bay Trail-Fremont Boulevard to Dixon Landing Connector

Margaret Henderson and Jeff Peters presented a PowerPoint at the meeting that is attached to the end of these notes. Rene Dalton represented City of Fremont and facilitated meeting and BPTAC committee discussion.

Key points of presentation are as follows.

- The trail represents the south terminus of the Bay Trail in Alameda County.
- Providing connections between Fremont Blvd. and Dixon landing Road will be key for trail users.
- The study team has met with Alameda County Flood Control District, who verbally agreed with the project. They have done channel maintenance in the project area.
- The study team met with Eric Mruz, head of US Fish and Wildlife Service Don Edwards Refuge (north of project area), who did not have issues with trails in the study area.
- The study team met with representatives of Newby Island Landfill, who indicated that trails on Newby perimeter would need to be built after geotechnical work to stabilize the landfill toe is completed in future years.
- The project is consistent with Fremont General Plan goals, and project goals.
- The site was partially improved to facilitate future development of the upland portion of the site. This included completion of the upland building pads and creation of a micro-tidal wetland east of the levee. This is regulated by culverts that connect to Coyote Creek and Line B.
- The trail would be completed as part of the Development Agreement for the King and Lyons site, however, there is a problem with the timeline, since the Development Agreement was extended, but there is a current need for trail connections.
- The study evaluated four bridge crossing locations of Coyote Creek, with a recommendation to place the crossing near the current Fremont Blvd. terminus to ease regulatory permitting.
- The bridge would connect the existing trail with the levee top to the south (Line B is improved trail on the north side, unimproved on the south side).
- There is no need to raise the south side levee for flood protection since the area east of the levee is habitat; levee improvements would be minimal to facilitate trail use.
- The levee in this area is largely privately owned (King and Lyons).
- Sea level rise in the project area is estimated at up to 1-1/2 feet by mid century and 3 feet by 2100. All the levees have a three foot cushion of elevation.

- Interim and permanent improvements are needed at Dixon Landing Road to facilitate bicycle pedestrian crossings, minimize truck conflicts, and to direct users to the trail. Permanent bicycle and trail connections at Fremont Blvd. would also be needed as part of development project.

3. Public/Committee Comments:

- There was a question regarding levee maintenance—ACFCWCD maintains Line B, there would need to be improvements to south levee (Line B) to make a uniform gravel surface for trail use. The likely trail surface would be stabilized quarry fines to provide a firm and stable surface without habitat impacts.
- Why not put the trail on the Fremont Blvd. extension? There will be a trail on the Fremont Blvd. extension, this will provide interim and loop trail opportunities that are off-street. This trail was also required as part of the Development Agreement.
- What are the maintenance requirements of the bridges? Piers and pilings need to be designed to withstand weak soils of Bay Mud load from the ground. The deck of the bridge can either be concrete pan or wood decking. The bridge can be a pre-built structure, designed to be removed when permanent improvements on Fremont Blvd. are completed, so that it can be used elsewhere.
- What is the status of the Bay Trail to the north? This area is currently under study to provide Bay Trail connections between this area, Fremont Blvd., north to Don Edwards Refuge via a shoreline route.
- Comment: Bicycle commuting along Dixon landing Road is bad, this route would provide opportunities for casual riders. The Dixon Landing Road area is very difficult.
- Does the Warren Avenue Bridge have bicycle facilities? There is a bike lane on Warren with shoulder stripes.

4. Next Steps

- Finalize Study Report , incorporating input from agencies
- Present to Council
- Apply for funding
- Design, regulatory permits and implementation

Cargill

SENT VIA EMAIL AND POSTAL SERVICE

July 1, 2011

Jeffrey H. Peters, Principal
Questa Engineering Corp.
Box 70356
1220 Brickyard Cove Road
Suite 206
Pt. Richmond, CA 94807

Subject: Newark-Fremont Bay Trail Realignment Feasibility Study
Cargill file: 2000.018.18

Dear Mr. Peters:

Thank you for holding the public workshop meeting on June 13 regarding the Newark-Fremont Bay Trail Realignment Feasibility Study at the Newark Silliman Center. I am glad I was able to attend as there are a few items that should be corrected for the record as well as reinforced from my response letter submitted to you on March 23, 2011.

I have attached a copy of the meeting notice for the June 13 public workshop for your reference. It is important to note that the title of your June 13 notice fails to include one important word, which is "Realignment". The title should read "Newark-Fremont Bay Trail Realignment Feasibility Study", not "Newark-Fremont Bay Trail Feasibility Study". The fact that there is currently a Bay Trail through portions of each segment is important to note not just in the text, but also in the title. It presents a false sense that there is no Bay Trail there at all and this should be corrected in future documents.

As a Bay Trail Board Member, I realize that the ideal alignment for the Bay Trail is along the edge of the Bay, and many of these segments exist today. With that said, there is a general recognition by the Bay Trail Board that that may not always be possible. Many sections of the Bay Trail are along streets and sidewalks. In fact, in your presentation at the public workshop, you mentioned the new Cushing Blvd

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sidewalk in Fremont as being a new segment of the Bay Trail. All of these contributions to the Bay Trail help the project get closer to the goal of 500 miles.

Lastly, for your reference, I have also attached a copy of my March 23, 2011 letter, which was in response to your March 18, 2011 letter. Both the Refuge and Cargill's positions have not changed. Therefore, in summary, your proposed alignment and/or alternatives through Cargill's lands and operations is infeasible and not possible and we strongly recommend you focus the study on improving the already existing alignment in these segments.

Sincerely,

Pat Mapelli
Manager, Real Property
Cargill Salt
7220 Central Avenue
Newark, CA 94560

cc: Eric Mruz, Refuge Manager - DESFBNWR

2000.019:1P

Newark-Fremont Bay Trail Feasibility Study

The Cities of Newark and Fremont, as well as the San Francisco Bay Trail Project, are jointly conducting a Feasibility Study to identify potential Bay Trail routes between Highway 84 (Dumbarton Bridge and Don Edwards Wildlife Refuge Headquarters) and Dixon Landing Road near Highway 880 (Milpitas and Santa Clara County line).

Attend the following community workshop for an opportunity to share your ideas...

Community Workshop

Monday, June 13, 2011
6:30 to 8:30 PM

Silliman Family Aquatic Center
6800 Mowry Avenue (southwest of Cherry Street)
Newark, California 94560
(Driving directions on reverse)

One Bay Trail goal is to locate trails near the SF Bay shoreline. This Study will evaluate alignments to meet this goal, including potential trails on levees through Wildlife Refuge lands. The current Bay Trail alignment follows along Thornton Avenue, Cherry Street, Boyce Ave, Cushing Parkway, and portions of Fremont Boulevard, with a possible future alignment along or near the Union Pacific railroad tracks within the ACE train corridor.

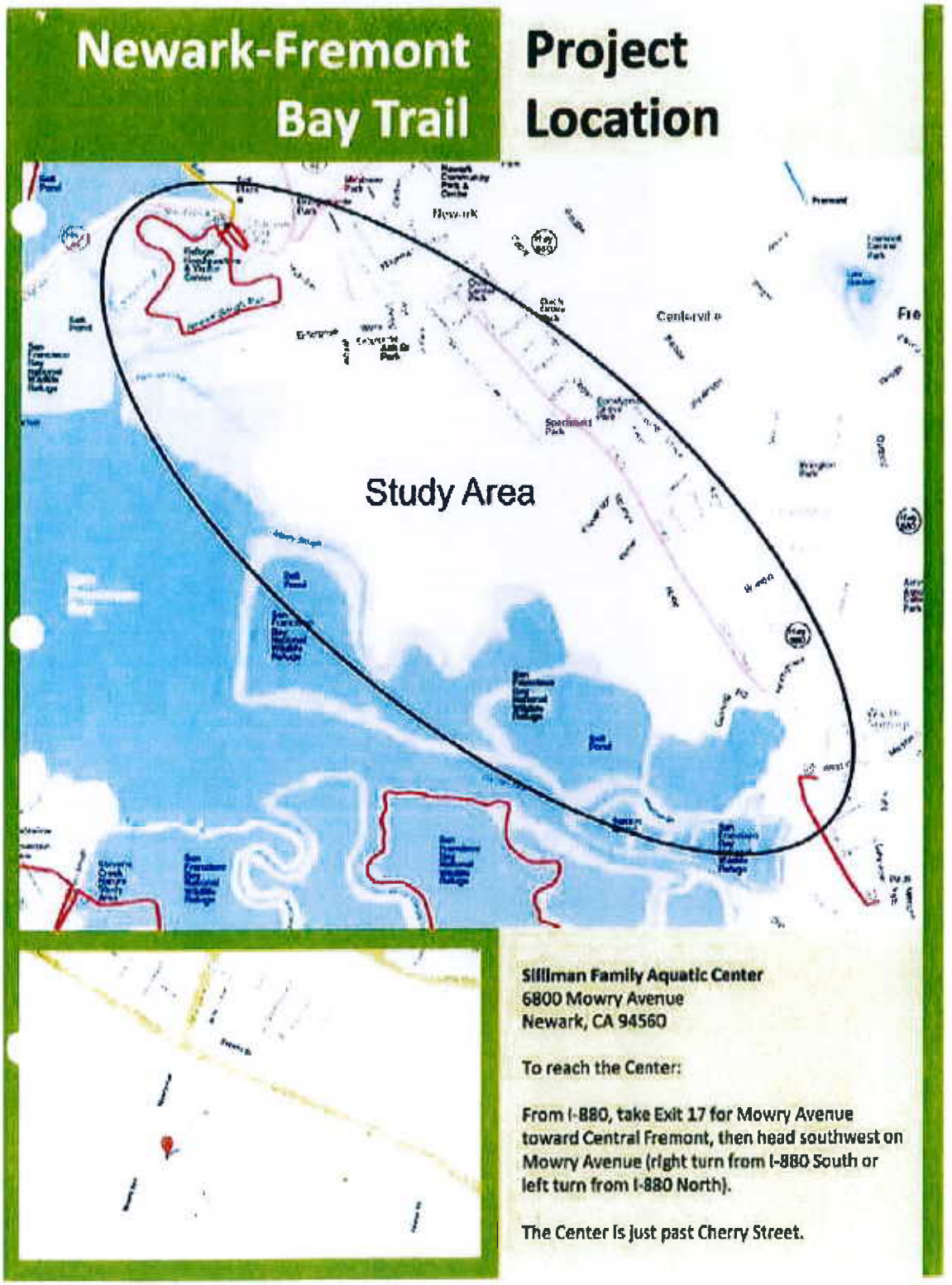
This workshop is occurring near the beginning of the planning process and your involvement is encouraged. The project Study Team will make a presentation describing the Feasibility Study, including a discussion of trail alignments currently being evaluated, as well as issues affecting potential alignments. Public concerns regarding trail user safety, privacy, conflicts with adjacent property owners and business operations, as well as environmental concerns, will be discussed, and the public will be given the opportunity to provide comments and input on the alignment alternatives and other related issues.

Information:

Terrence Grindall
City of Newark
terrence.grindall@newark.org

or

Rene Dalton
City of Fremont
rdalton@fremont.gov


Newark-Fremont Bay Trail
Project Location
Study Area
Silliman Family Aquatic Center
6800 Mowry Avenue
Newark, CA 94560
To reach the Center:
From I-880, take Exit 17 for Mowry Avenue toward Central Fremont, then head southwest on Mowry Avenue (right turn from I-880 South or left turn from I-880 North).
The Center is just past Cherry Street.

Cargill

SENT VIA EMAIL AND POSTAL SERVICE

March 23, 2011

Jeffrey H. Peters, Principal
Questa Engineering Corp.
Box 70356
1220 Brickyard Cove Road
Suite 206
Pt. Richmond, CA 94807

Subject: Newark-Fremont Bay Trail Realignment Feasibility Study
Cargill file: 2000.018:18

Dear Mr. Peters:

I am writing in response to your letter dated March 18, 2011 regarding the Newark-Fremont Bay Trail Realignment Feasibility Study. The study you are conducting is to determine the feasibility of realigning the current bay trail segment between Newark and Fremont. Your current draft proposal shows the realignment through and immediately adjacent to Cargill's fee owned lands and the heart of our industrial salt operation in the City of Newark.

My comments on your map labeled "DRAFT – NOT FOR PUBLIC RELEASE" are attached, so I will not verbally comment on the map in this letter.

With respect to your letter, I do have a few comments and corrections. First, I would have to disagree with you that the construction of the Bay Trail in the vicinity you have shown on your map provides benefits to Cargill. Your comment that it would relieve Cargill's liability for any trespassing and injury is not true. You mentioned that the Bay Trail would provide a perimeter security system and patrol. Cargill already has security patrol and our current buffers provide the additional security we need without the requirement for fencing. You claim that the levee improvement would provide us with flood protection. We provide ourselves with flood protection – it is an inherent part of our operations. Also, compensation for Cargill's lands is not a benefit but rather an exchange or trade. Again, you mention operation and

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maintenance of the levee to be paid for by others. Although this sounds nice, our experience has shown that we cannot fully rely upon others to protect our operations. Lastly you mention providing a unique opportunity (through interpretive trail panels) to educate the public about our salt making operations. This is something we always strive to do and in fact, do participate in this effort with our partners at the Don Edwards San Francisco Bay National Wildlife Refuge. With all of that said, I would have to disagree that the current proposed realignment would provide Cargill with a number of benefits.

One other correction I would like to make in your letter is with regards to your comment on Cargill providing flood protection. Your sentence reads, "We were not fully aware of the importance of the Cargill levee system in providing urban flood protection (despite apparently not being official FEMA certified levees)." I don't think you fully understood the conversation in our meeting. Our perimeter levees are designed and maintained to protect our salt operations from the bay and urban runoff in order to have control and manage our salt making system. It is inherent that they do provide some relief for certain urban areas, but for the record, our levees are not "providing urban flood protection". It is important that you fully understand the sensitivity we have with this issue.

As I mentioned in our meeting on February 11, Cargill is not only a supporter of the Bay Trail Project, but Cargill is a representative on the Bay Trail Board. Of the 310+/- miles that currently exist as part of the Bay Trail, approximately 77+/- miles have been made possible on current and former salt making lands. Some of the closest access to the Bay is located on current and former salt making lands. There is also a general recognition that access immediately adjacent to the Bay is not always possible. For example, the Bay Trail passes through highly urbanized areas like downtown San Francisco and consists of trail segments like bike lanes, sidewalks and paved streets – as is the current Bay Trail alignment through the City of Newark.

After discussion and review with Cargill staff, our operations personnel, our maintenance personnel, the Refuge, as well as a thorough review of the final judgment between Leslie Salt Co. (Cargill's predecessor) and the federal government that details our operations agreement with the Refuge, we have concluded that the feasibility of a realignment of the Bay Trail through and adjacent to our operations is not possible nor feasible.

As a suggestion, one of the alternatives to consider should be improving the current Bay Trail alignment between Newark and Fremont to promote continued and increase usage. Another alternative would be to consider a possible alignment parallel to the Union Pacific Rail Road on their property. Hopefully these suggestions can lead you to a successful study.

In closing, I would like to thank you for your time and your efforts on the work that you have done to date. Unfortunately, your proposal is infeasible for Cargill and the Refuge and we strongly suggest that your efforts be focused on an alignment that does not require Cargill properties or rights. Should you have any questions, please feel free to give me a call at (510) 790-8610 or alternatively you can email me at pat_mapelli@cargill.com.

Sincerely,

Pat Mapelli
Manager, Real Property
Cargill Salt
7220 Central Avenue
Newark, CA 94560

cc: Eric Mruz, Refuge Manager - DESBNWR

NOTE: A PORTION OF SEG 2, ALL OF SEG 3, SEG 4, AND SEG 5 ARE NOT FEASIBLE ACCORDING TO CARGILL.

SEG 3 - CARGILL FEE TITLE LANDS
SEG 4 - " " "
SEG 5 - PORTION IS CARGILL FEE TITLE LANDS

DRAFT- NOT FOR PUBLIC RELEASE

COMMENTS MADE BY PAT MAFELLI - 3/23/11

Appendix B

Federal or State Protected Plant & Animal Species

This appendix is a discussion of the twenty-six Sensitive Species with the potential for the occurrence in the Feasibility Study Area along with a table with their potential to occur. Some species are of particular interest and are also discussed in the Biological Section of the Newark Fremont Feasibility Study.

Sensitive Species with Potential to occur	Sensitive Species of Particular Concern
1) Alameda song sparrow	1. Alameda whipsnake
2) Alkali milk vetch	2. Black rail
3) Brittlescale	3. Western burrowing owl
4) Bush seepweed	4. California clapper rail
5) California seablite	5. Fall-run Chinook Salmon (Central Valley ESU)
6) California tiger salamander	6. Pacific harbor seal
7) Congdon's tarplant	7. Salt marsh harvest mouse
8) Contra Costa goldfields	8. Steelhead (CA Central ESU)
9) Hoover's button celery	9. Vernal pool tadpole shrimp
10) Northern harrier	10. Western snowy plover
11) Prostrate navarretia	
12) Red-tailed hawk	
13) Salt marsh yellowthroat	
14) San Joaquin saltbrush=spearscale	
15) Tricolored blackbird	
16) White-tailed kite	

Federally or State Listed or Proposed Animal Species

Alameda Song Sparrow

The Alameda song sparrow (*Melospiza melodia pusillula*) is one of three subspecies of song sparrow endemic marshland of the San Francisco Bay. Alameda song sparrows breed among tidal sloughs at the edge of bays and streams, preferring pickleweed dominated marsh with gumplant (*Grindelia spp*) that's high enough to provide high tide refuge. Alameda song sparrow is known to occur around Dumbarton Point, Newark Slough, and also near Newby Island Landfill. This species has the potential to occur in the Feasibility Study Area in areas of salt tidal marsh or tidal slough (especially in areas with dense pickleweed and gumplant).

Alameda Whipsnake

The Alameda whipsnake (*Masticophis lateralis euryxanthus*) is a federally and state listed threatened species. It is a 6 foot long, green and orange striped ("lateralis euryxanthus" refers to this species orange stripes), swift, whip-like snake thought to only live in the mountains of Contra Costa, Alameda, and northeastern Santa Clara counties. This animal is known to live in chaparral and scrub habitats but may also occur in adjacent grasslands, oak savanna and oak woodland habitats. The Alameda whipsnake has 2 recorded occurrences within the general region; however they were confined within oak woodland and grassland complexes east of the project area. They are not expected to occur within the Feasibility Study Area, as there is no suitable habitat present.

California Black Rail

The California black rail (*Laterallus jamaicensis corturniculus*) is a small (6 in length) and difficult to observe year-round resident of tidal emergent wetlands dominated by pickleweed as well as brackish marshes dominated by a mix of bulrush and pickleweed. California black rails nest at ground level in dense vegetation at the upper limits of tidal flooding (Dumbarton EIR, Creekside Landing EIR). California black rail is known to occur in tidal marsh in the general area and had a CNDDB occurrence noted in 2003 at nearby Dumbarton Point. California black rail has potential to occur in the Feasibility Study Area in areas with tidal marsh.

Western Burrowing Owl

A California species of special concern, western burrowing owls (*Athene cunicularia hypugaea*) are found in open, grassland, rural and desert habitats associated with burrowing mammals (especially ground squirrels). They are also known to make use of concrete culverts, riprap, and levies for breeding wintering, foraging and migration stopovers. Western burrowing owls are known to occur in the general area in burrows located in agricultural fields and on the edges of levees (Creekside Landing EIR). Burrowing owls are known to inhabit the levee and adjacent upland areas of a South Bay Salt Pond Restoration Project pond that occurs in the southwest part of Feasibility Study Area (SBSPRP EIR).

California Clapper Rail

The California clapper rail (*Rallus longirostris obsoletus*) is a federal and state listed endangered species endemic to the marshes of San Francisco Bay. California clapper rails nest in salt and brackish marshes along the edge of the Bay, and forage on crabs, clams, and other invertebrates. Breeding-season surveys of the South Bay conducted by various agencies and organizations during the 1990's found California clapper rails to be primarily concentrated in larger areas of tidal marsh, in alkali bulrush-dominated brackish marsh and saline/brackish transitional marshes. California clapper rails are also known, in rare occasions, to occupy brackish/freshwater transition marshes during the non-breeding season. A CNDDB search revealed the clapper rail to have known occurrences near Newark, Mowry and Mud sloughs.

California Tiger Salamander

California Tiger Salamander (*Ambystoma californiense*) is a federally and state listed threatened species. California tiger salamanders are associated with deep vernal pools or other similar habitats capable of remaining wet long enough to support this specie's comparatively long maturation period. California tiger salamanders are rarely found far from their breeding ponds or seasonal underground refugia (ground squirrel burrows). Migration barriers include obstacles such as road berms, buildings, walls, or hazards such as roads with high levels of traffic. Four occurrences of California Tiger Salamanders area are listed in the CNDDB from the deep vernal pools of the Pacific Commons vernal pool mitigation area off of Auto Mall Parkway. California tiger salamander have potential to occur in segment 6B of the project which is a vernal pool complex area east of Union Pacific Railroad, west of Cushing Parkway, south of Auto Mall Parkway and north of Mud Slough.

Fall-run Chinook Salmon (Central Valley ESU)

A California species of special concern, Chinook salmon (*Oncorhynchus tshawytscha*) is a salmonid known to occur in Coyote Creek. This species is known to move through Coyote Creek and possibly other sloughs to upstream spawning areas.

Northern Harrier

Also known as the marsh hawk, the northern harrier (*Circus cyaneus*) is a raptor and California species of special concern that breeds in fresh and brackish wetlands (Creekside Landing EIR). The northern harrier is known to forage throughout the Feasibility Study Area. The northern harrier is also know to nest in nearby salt marsh habitat (CNDDB) and may nest in diked salt marsh in the Feasibility Study Area.

Pacific Harbor Seal

Pacific harbor seals (*Phoca vitulina richardsi*) are true seals, having no ear flaps or limbs sufficient for terrestrial locomotion. They have spotted coats in a variety of shades from white or silver-gray to black to dark brown. They grow between five and six feet in length and may weigh up to 300lbs. Pacific harbor seals are not a listed species, however they are protected by the Federal Marine Mammal Protection Act. Pacific Harbor Seals are known to pup in Mowry Slough in the Feasibility Study Area and may abandon their pups if they are approached or otherwise disturbed by humans.

Red-tailed Hawk

The red-tailed hawk (Buteo jamaicensis) is protected under the US Migratory Bird Treaty Act and is a raptor known for its use of a wide variety of habitat types. Red-tailed hawks have been observed in the Feasibility Study Area foraging over Cargill salt ponds near Cargill's Newark plant site during recent biological studies (Dumbarton EIR). They also reportedly nest in trees and utility towers in the Feasibility Study Area.

Salt-marsh Harvest Mouse

The salt marsh harvest mouse (*Reithrodontomys raviventris*) is federally and state listed as an endangered species. A small native rodent, the salt marsh harvest mouse is primarily found in tidal and non-tidal, or muted marshes with a dense cover of pickleweed (*Salicornia virginica*) and only around San Francisco, San Pablo, and Suisun Bays. Habitat loss, competition with other small mammals, especially western harvest mice, lack of adequate cover and vulnerability to predation limit their populations. Salt marsh harvest mice are known to occur in tidal and muted marsh habitat throughout the Feasibility Study Area and they should be considered likely to be present where ever there is suitable habitat.

Salt-marsh Yellow-throat

The yellow and black masked warbler known as the salt-marsh common yellowthroat (*Geothlypis trichas sinuosa*) is a state species of special concern and is protected under the Federal Migratory Bird Treaty Act. It is a permanent resident of marsh habitat in the San Francisco Bay, often found near cattails, tules or tall grasses which they use for nesting. The nearest reported occurrence is from Line B at the southern end of Bayside Business Park near the Don Edwards National Wildlife Refuge where the species was seen among bulrush. (CNDDB)

Western Snowy Plover

Western snowy plover (*Charadrius alexandrines nivosus*) is a small-bodied shorebird with a pale brown upper body, dark patches on either side of the upper breast, and dark gray to blackish legs. Snowy plovers weigh less than a ¼ pound and are about 6 inches long. Habitats used by nesting and non nesting birds include sandy coastal beaches, salt pannes, coastal dredged spoils sites, dry salt ponds, salt pond levees and gravel bars. The western snowy plover has been observed in active and inactive salt ponds within the Don Edwards National Wildlife Refuge and in Newark Slough near the Feasibility Study Area.

Steelhead (CA Central ESU)

A type of rainbow trout, the federally threatened steelhead (Oncorhyncus mykiss) is known from several streams in the South Bay, including Coyote Creek. It is not well documented whether they spawn in any reach of Coyote Creek in the Feasibility Study Area but like Chinook salmon, they are known to move through sloughs between the bay and upstream spawning streams and have been observed in Coyote Creek during migration periods.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor)*, is named this because of the bright red and white patches on its shoulders, it is a California species of special concern. They are a social species that usually nest in colonies of 50 or more individuals in dense stands of cattails (*Typha spp.*) or tules (*Scirpa spp.).* They have been observed along Scott Creek near Highway I-880 and Dixon Landing Road and have potential to also be present in areas of brackish marsh.

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp (*Lepidurus packardi*) is a federal listed endangered species that has no California ESA status. Vernal pool tadpole shrimp are approximately 2 inch long aquatic crustaceans found in vernal pools with clear to turbid water. The occurrences of this species in the Feasibility Study Area (like the California Tiger Salamander), is confined to the deep vernal pools in and around the Pacific Commons vernal pool mitigation site and the Warms Springs unit of the Don Edwards Wildlife Refuge.

White-tailed Kite

A California Fully Protected Species, the white-tailed kite (*Elanus leucurus*) is a black and white raptor known to nest near marshes. This species is known to forage and nest throughout the Feasibility Study Area and has a moderate potential to occur where there's suitable nesting habitat

Federally or State Listed Endangered or Threatened Plant species

Alkali Milk Vetch

Alkali milk vetch (*Astragalus tener var. tener*) is a CNPS listed and federal species of concern. It is often found in moist, alkaline soils such as those near vernal pools, foothill grasslands, meadows, playas, and the upper edges of salt marshes. It grows up to 1 foot in height and is a delicate, sparsely hairy to smooth annual herb. It occurs in protected habitat within the Pacific Commons Mitigation Site near the central part of the Feasibility Study Area, where it's found at the edges of vernal pools.(CNDDB)

Brittlescale

Brittlescale (*Atriplex depressa)* is a CNPS listed species with no federal or state status. It is an annual chenopod with a prostrate growing habit often found in barren areas with alkaline or clay soils. It also occurs in some grasslands, meadows, seeps, playas and vernal pools. It is known to occur in the Don Edwards Wildlife Refuge Seasonal Wetlands Unit of the Warm Springs Area. The species was reported as occurring in an alkaline vernal pool/grassland complex in areas that drain to vernal pools.

Bush Seepweed

Bush seepweed (*Suaeda moquinii*) is a locally unusual shrub known to occur in wet alkaline, saline and wetland areas throughout California. This species was observed in the Project Study Area and relocated to the wetlands mitigation area associated with Creekside Landing near the south end of the Feasibility Study Area.

California Sea Blite

California seablite (*Suaeda californica*) is an evergreen shrub, that occurs along from the margins of coastal salt marshes. The only CNDDB record for this species in the south bay is from a 1986 collection. It is assumed to have been collected from Mud Slough, in the southwest part of the Feasibility Study Area. California seablite is a moderately conspicuous shrub and has not been seen within the Feasibility Study Area despite the completion of many rare plant surveys and over the last 20 years.

Congdon's Tarplant

Congdon's tarplant (*Centromadia parryi ssp. congdonii*) is a CNPS listed species with no federal or state status. It is a small annual tarplant often found in alkaline soils in grassland habitats. The CNDDB cites it as having three current occurrences in the Project Study Area: (1) the embankment of an unused Union Pacific Railroad track near seasonal wetland habitat, (2) along dirt roads and the upper margins of vernal pools in Pacific Commons Mitigation Site, and (3) annual grassland near the intersection of Fremont Blvd and Cushing Parkway.

Contra Costa Goldfields

Contra Costa goldfields (*Lasthenia conjugens*) is a federally listed endangered species with no state status. In the family Asteraceae, this plant grows between 4 and 12 inches high, has opposite leaves, and an infrequently branched stem. The blooming period is from March through June and it has specialized adaptations to allow it to grow in vernal pools. The species is an annual, which allows it to complete its life cycle within the time period of vernal pool inundation and drying. It produces dormant seeds that allow them to survive through the dry summers until they can germinate when the winter rains re-flood the vernal pool habitat. There are three known occurrences of this species in the vicinity of the Feasibility Study Area of which two of these are located in vernal pool complexes within the Feasibility Study Area.

Hoover's Button Celery

Hoover's button celery (*Eryngium aristulam hooveri*) is a CNPS listed species with no federal or state status. A member of the carrot family, (Apiaceae/Umbelliferae) this species also occurs in vernal pool habitats. The closest reported official Hoover's button celery occurrence is near Mayfield and Charleston Sloughs in Palo Alto; however a non-flowering specimen of the genus *Eryngium* was found in the Project Study Area in 2009.

Prostrate Navarretia

Prostrate navarretia (*Navarretia prostrata*) is a CNPS listed and federal species of concern. It is a small annual plant with a prostrate growth habit that occurs on undisturbed floodplains and vernal pools. It is known to occur at the Pacific Commons Mitigation Site near the center of the Feasibility Study Area. It has potential to occur within other areas of the Feasibility Study Area on site where there is suitable habitat.

San Joaquin Saltbrush=Spearscale

Also known as San Joaquin saltbrush, the San Joaquin spearscale (*Atriplex joaquiniana)* is a CNPS listed species and federal species of concern. It is a gray-green annual herb with a sparsely scaled stem and leaves. It is known to occur in meadows, seeps, and grasslands with clay often alkaline soils. This species is known to occur in the Pacific Commons Mitigation Site near the center of Feasibility Study Area.

Table 1. Federal or State Protected Plant & Animal Species with their Potential to Occur on the Project Site

Name	Fed/State/CNPS Status	Habitat	Potential for Occurrence on site
Alameda Song Sparrow *Melospiza melodia pusillula*	---/SSC/--	Salt marsh, especially in channels with marsh gumplant and cordgrass.	Has potential to occur in the Feasibility Study Area in areas of salt tidal marsh or tidal slough (especially in areas with dense pickleweed and presence of gumplant).
Alameda whipsnake *Masticophis lateralis euryxanthus*	T/T/--	Chaparral, Scrub land, Oak woodland/ grassland complex	Not expected to occur on site; suitable habitat not present.
Alkali Milk Vetch *Astragalus tener var. tener*	SC/---/1B	Alkaline soils of playas grasslands and vernal pools	Known to occur in the seasonal wetlands of Catellus' Pacific Commons Preserve
Black Rail *Laterallus jamaicensis coturniculus*	---/T/---	Mainly inhabits salt marshes bordering bays also brackish & freshwater marshes. Nests and forages in dense pickleweed.	Known to occur in tidal marsh in the general area and had a CNDDB occurrence in 2003 at the nearby Dumbarton Point. California black rail has potential to occur in the Feasibility Study Area in areas with tidal marsh.
Brittlescale *Atriplex depressa*	---/--/1B	Barren areas of alkali grassland, meadow and scrub; margins of alkali vernal pools	Known from the Don Edwards National Wildlife Refuge, Warm Springs Seasonal Wetland Unit (Creekside Landing EIR)
Western Burrowing Owl *Athene cunicularia hypugaea*	---/SSC/--	Inhabits grasslands, scrublands and ruderal areas. Subterranean nester dependant on burrowing mammals.	Burrowing owls are known to nest the levee and adjacent upland areas of a South Bay Salt Pond Restoration Project pond that occurs in the Feasibility Study Area (SBSPRP EIR).
Bush Seepweed *Suaeda moquinii*	---/--/1A	Wet alkaline and saline areas; wetlands	Population relocated to nearby Creekside Landing wetland mitigation area.
California Clapper Rail *Rallus longirostris obsoletus*	E/S/---	Salt marsh habitat dominated by pickleweed and cordgrass.	Known to Newark, Mowry, and Mud sloughs.
California Seablite *Suaeda californica*	E/---/--	Marshes and Swamps	Highly unlikely to occur as it has not been seen in rare plant surveys in the past 25 years.
California Tiger Salamander *Ambystoma californiense*	T/T/--	Deep Vernal or temporary pools in annual grasslands or open woodlands.	California tiger salamander is known to occur near Catellus' Pacific Commons mitigation ponds, a site which is being managed for this species.

Name	Fed/State/CNPS Status	Habitat	Potential for Occurrence on site
Fall-run Chinook Salmon Central Valley ESU *Oncorhyncus tshawytcha*	T/T/--	Pacific Ocean, spawn in coastal streams and rivers over gravel beds	Known to be present in Coyote Creek during migrations.
Congdon's Tarplant *Centromadia parryi ssp. congdonii*	---/---/1B	Grassland habitats with alkaline soils, vernal pools, ruderal areas	Sighted throughout the Feasibility Study Area near the Union Pacific railroad, in the Pacific Commons Preserve and near Cushing Parkway.
Contra Costa Goldfields *Lasthenia conjugens*	E/---/--	Vernal pool complex	Moderate potential to occur on site in vernal pool complex habitat. Species is known to occur in study area.
Hoover's Button Celery *Eryngium aristulatum hooveri*	---/---/1B	Vernal pool complex	Specimen of genus found in Feasibility Study Area by Monk & Associates biologists in 2009.
Northern Harrier *Circus cyaneus*	---/SSC/--	Grassland and wetland communities	Known to forage throughout the Feasibility Study Area. The northern harrier is also know to nest in nearby salt marsh habitat (CNDDB occurrence 2) and may nest in diked salt marsh in the Feasibility Study Area.
Pacific Harbor Seal *Phoca vitulina richardsi*	MMP/---/--	Forage in near shore marine habitats	Pupping site in Mowry Slough
Prostrate Navarretia *Navarretia prostata*	SC/---/1B	Seasonal wetlands & vernal pools within grassland also coastal scrub	Known from Catellus' Pacific Common Preserve
Red-tailed Hawk *Buteo jamaicensis*	MBT/---/--	Wide spectrum of habitats however pasture, grasslands and hadrwood habitats preferred.	Observed foraging over Cargill property within the Feasibility Study Area and there's evidence to suggest they may nest there as well.
Salt-marsh Harvest Mouse *Reithrodontomys raviventris*	E/E/---	Salt marsh habitat dominated by pickleweed	Known to occur in muted tidal marsh areas with pickleweed. Species known to occur near Catellus' Pacific Commons Mitigation Area.
Saltmarsh Yellowthroat *Geothlypis trichas sinuosa*	---/SSC/--	Marsh habitat throughout the SF Bay near emergent vegetation.	Sited in irrigation channel "B" in the southern part of Bayside Business Park near the Don Edwards Wildlife Refuge among bulrush.
San Joaquin Saltbrush/Spearscale *Atriplex joaquiniana*	SC/---/1B	Chenopod scrub, meadows and seeps, playas and grasslands; typically with alkaline soils.	Potential to occur in seasonal wetlands of Catellus' Pacific Commons Preserve.
Steelhead- CA Central ESU *Oncorhyncus mykiss*	T/---/---	Pacific Ocean, spawn in coastal streams and rivers over gravel beds	Known to occur in Coyote Creek during migrations

Name	Fed/State/CNPS Status	Habitat	Potential for Occurrence on site
Tricolored Blackbird *Agelaius tricolor*	SC/SC/---	Nests colonially in vicinity of freshwater, marshy areas. Colonies prefer heavy growth of emergent vegetation	Species known from general area potential to occur in the Feasibility Study Area in marsh areas supporting cattails and bulrush.
Vernal Pool Tadpole Shrimp *Lepidurus packardi*	E/---/--	Vernal pools and swales containing clear to highly turbid water	Known from Don Edwards Wildlife Refuge vernal pools.
Western Snowy Plover *Charadrius alexandrines nivosus*	T/SSC/---	Sandy beaches on marine and estuarine shores.	Species has been observed in active and inactive salt ponds within the Don Edwards National Wildlife Refuge and in Newark Slough near the Feasibility Study Area. ..
White-tailed Kite *Elanus leucurus*	SC/FP/---	Nests in tree stands near grassland, marsh and ruderal forage areas	Known to occur in the Feasibility Study Area may nest around suitable diked salt marsh habitat or ruderal habitat (Dumbarton EIR).

E – Endangered under the Federal or State Endangered Species Act
T- Threatened under the Federal or State Endangered Species Act
FP – Fully Protected under the State Endangered Species Act
MBT – Protected under the Federal Migratory Bird Treaty Act
MMP – Protected under the Federal Marine Mammal Protection Act
SC – Federal species of concern
SLC – Federal species of local concern
SSC – California species of special concern
1A- Plants assumed extinct or extirpated from California
1B- Plant species that are rare, threatened, or endangered in California and elsewhere
Source: EIRs used in study, CNDDB search of 5 miles surrounding project site.

Appendix C

Preliminary Project Costs

Segment/Description					5,200 LF
1	USFWS Don Edwards Wildlife Refuge East Levee/Connection to Thornton Avenue				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$44,600.00	$44,600
	b) Grading & Levee Top Improvements	LF	5,200	$10.00	$52,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	10,400	$2.50	$26,000
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF	0	$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	26,000	$3.50	$91,000
	f) 4-ft. Post & Rail or Wildlife Fence	LF	0	$11.00	$0
	g) 6-ft. Chain Link Security Fence	LF	0	$16.00	$0
	h) Landscaping/Habitat Restoration	LF	5,200	$4.00	$20,800
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF	100	$700.00	$70,000
	j) 10-ft-wide Pedestrian Bridge	LF	75	$1,800.00	$135,000
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	5	$2,000.00	$10,400
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	0	$10,000.00	$0
	Trailhead Parking & Improvements (10 cars)	LS	1	$25,000.00	$25,000
	Bikeway Signage, Striping, Stencil	LF	0	$20.00	$0
	Segment Subtotal				$489,800
	Plus 15% Contingency				$73,500
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$563,300
	Engineering Design - 15%				$84,500
	CEQA/NEPA & Permitting - 8%				$45,100
	Construction Management, Surveying, & Staking - 12%				$67,600
	TOTAL (to nearest $1,000)				$761,000

Segment/Description					9,500 LF
3*	Central and Cherry Streets Interim Bicycle/Pedestrian Use				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$14,800.00	$14,800
	b) Grading & Levee Top Improvements	LF		$10.00	$0
	c) Levee Sideslope Stabilization, Erosion Control	LF		$2.50	$0
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF		$3.50	$0
	f) 4-ft. Post & Rail or Wildlife Fence	LF		$11.00	$0
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	9,500	$4.00	$38,000
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF		$2,000.00	$0
	l) Overlook w/ Interpretive Panels - Wayfinding	LS		$15,000.00	$0
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	3	$10,000.00	$30,000
	Trailhead Parking & Improvements (10 cars)	LS		$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF	4,000	$20.00	$80,000
	Segment Subtotal				$162,800
	Plus 15% Contingency				$24,500
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$187,300
	Engineering Design - 15%				$28,100
	CEQA/NEPA & Permitting - 8%		NA		
	Construction Management, Surveying, & Staking - 12%				$22,500
	TOTAL (to nearest $1,000)				$238,000

* Cost does not include grade separation on Central Avenue

Segment/Description					14,700 LF
2*	Dumbarton TOD Project, ACVCWCD Levee Trail				10,000 LF Dumbarton TOD 4,700 LF ACFCWCD Levee
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$88,600.00	$88,600
	b) Grading & Levee Top Improvements	LF	4,700	$10.00	$47,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	9,400	$2.50	$23,500
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF	100,000	$5.50	$550,000
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	4,700	$3.50	$16,500
	f) 4-ft. Post & Rail or Wildlife Fence	LF	10,000	$11.00	$110,000
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	14,700	$4.00	$58,800
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	15	$2,000.00	$30,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	1	$10,000.00	$10,000
	Trailhead Parking & Improvements (10 cars)	LS	1	$25,000.00	$25,000
	Bikeway Signage, Striping, Stencil	LF	0	$20.00	$0
	Segment Subtotal				$974,400
	Plus 15% Contingency				$146,200
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$1,120,600
	Engineering Design - 15%				$168,100
	CEQA/NEPA & Permitting - 8%				$89,700
	Construction Management, Surveying, & Staking - 12%				$134,500
	TOTAL (to nearest $1,000)				$1,513,000

*This segment could potentially be partially implemented as part of the Dumbarton TOD projectapproval by the City of Newark.
(including item d-Sub-base & AC Paving, item f-Post & Rail or Wildlife Fence, and any grade separation)
Cost does not include grade separation at DumbartonTOD or Central Avenue

Segment/Description					16,130 LF
5	Mowry Slough Spur Trail				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$62,700.00	$62,700
	b) Grading & Levee Top Improvements	LF	16,130	$10.00	$161,300
	c) Levee Sideslope Stabilization, Erosion Control	LF	32,260	$2.50	$80,700
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	16,130	$3.50	$56,500
	f) 4-ft. Post & Rail or Wildlife Fence	LF		$11.00	$0
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	16,130	$4.00	$64,600
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF	0	$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF	120	$1,800.00	$216,000
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	16	$2,000.00	$32,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	0	$10,000.00	$0
	Trailhead Parking & Improvements (10 cars)	LS	0	$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF	0	$20.00	$0
	Segment Subtotal				$688,800
	Plus 15% Contingency				$103,400
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$792,200
	Engineering Design - 15%				$118,900
	CEQA/NEPA & Permitting - 8%				$63,400
	Construction Management, Surveying, & Staking - 12%				$95,100
	TOTAL (to nearest $1,000)				$1,070,000

Segment/Description					10,440 LF
4*	Area 3 and 4 Specific Plan Improvements (Silliman Center Improvements)				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$100,800.00	$100,800
	b) Grading & Levee Top Improvements	LF	10,440	$10.00	$104,400
	c) Levee Sideslope Stabilization, Erosion Control	LF	0	$2.50	$0
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF	104,400	$5.50	$574,200
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	0	$3.50	$0
	f) 4-ft. Post & Rail or Wildlife Fence	LF	10,440	$11.00	$114,900
	g) 6-ft. Chain Link Security Fence (UPRR)	LF	5,000	$16.00	$80,000
	h) Landscaping/Habitat Restoration	LF	10,440	$4.00	$41,800
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	10	$2,000.00	$20,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$12,000.00	$12,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	1	$10,000.00	$10,000
	Trailhead Parking & Improvements (10 cars)	LS	2	$25,000.00	$50,000
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$1,108,100
	Plus 15% Contingency				$166,300
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$1,274,400
	Engineering Design - 15%				$191,200
	CEQA/NEPA & Permitting - 8%				$102,000
	Construction Management, Surveying, & Staking - 12%				$153,000
	TOTAL (to nearest $1,000)				$1,721,000

* This trail segment could potentially be implemented by developer of Area 3/4 Specific Plan as part of project approval by City of Newark.
(including items a, b, d, e, f, g, h, k, and l)
Cost does not include Mowry Pedestrian/Bicycle Bridge

Segment/Description					Tri-Cities Landfill/City of Fremont/ USFWS/ACFCWCD Levee Trails 31,200 LF (Total Segment 6)
6.1*	Tri-Cities Landfill				13,600 LF
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$156,800.00	$156,800
	b) Grading & Levee Top Improvements	LF	12,100	$10.00	$121,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	24,200	$2.50	$60,500
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	121,000	$3.50	$423,500
	f) 4-ft. Post & Rail or Wildlife Fence	LF		$11.00	$0
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	13,600	$4.00	$54,400
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF	1,200	$700.00	$840,000
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	14	$2,000.00	$28,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	0	$10,000.00	$0
	Trailhead Parking & Improvements (Automall Parkway, 10 cars)	LS	1	$25,000.00	$25,000
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$1,724,200
	Plus 15% Contingency				$258,700
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$1,982,900
	Engineering Design - 15%				$297,500
	CEQA/NEPA & Permitting - 8%				$158,700
	Construction Management, Surveying, & Staking - 12%				$238,000
	TOTAL (to nearest $1,000)				$2,677,000

*This segment could potentially be implemented by Landfill by City of Fremont project approval.
Cost does not include Automall Parkway grade separation.

Segment/Description					Tri-Cities Landfill/City of Fremont/ USFWS/ACFCWCD Levee Trails 31,200 LF (Total Segment 6)
6.2*	USFWS Levees				10,200 LF
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$68,300.00	$68,300
	b) Grading & Levee Top Improvements	LF	10,200	$10.00	$102,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	20,400	$2.50	$51,000
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	102,000	$3.50	$357,000
	f) 4-ft. Post & Rail or Wildlife Fence	LF	10,200	$11.00	$112,200
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	10,200	$4.00	$40,800
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	10	$2,000.00	$20,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS		$15,000.00	$0
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS		$10,000.00	$0
	Trailhead Parking & Improvements (10 cars)	LS		$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$751,300
	Plus 15% Contingency				$112,700
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$864,000
	Engineering Design - 15%				$129,600
	CEQA/NEPA & Permitting - 8%				$69,200
	Construction Management, Surveying, & Staking - 12%				$103,700
	TOTAL (to nearest $1,000)				$1,167,000

* Potential coordination/implementation as part of South Bay Salt Ponds project, and/or UPRR track expansion.
Cost does not include Automall Parkway grade separation.

Segment/Description					Tri-Cities Landfill/City of Fremont/ USFWS/ACFCWCD Levee Trails 31,200 LF (Total Segment 6)
6.4	ACFCWCD Levees (Pond A23 Mud Slough W/S)				3,500 LF
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$23,600.00	$23,600
	b) Grading & Levee Top Improvements	LF	3,500	$10.00	$35,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	7,000	$2.50	$17,500
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	35,000	$3.50	$122,500
	f) 4-ft. Post & Rail or Wildlife Fence	LF	3,500	$11.00	$38,500
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	3,500	$4.00	$14,000
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	4	$2,000.00	$8,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS		$15,000.00	$0
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS		$10,000.00	$0
	Trailhead Parking & Improvements (10 cars)	LS		$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$259,100
	Plus 15% Contingency				$38,900
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$298,000
	Engineering Design - 15%				$44,700
	CEQA/NEPA & Permitting - 8%				$23,900
	Construction Management, Surveying, & Staking - 12%				$35,800
	TOTAL (to nearest $1,000)				$402,000

Segment/Description					Tri-Cities Landfill/City of Fremont/ USFWS/ACFCWCD Levee Trails 31,200 LF (Total Segment 6)
6.3	City of Fremont Old Cushing Road				3,900 LF
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$27,700.00	$27,700
	b) Grading & Levee Top Improvements	LF	3,900	$10.00	$39,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	7,800	$2.50	$19,500
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	39,000	$3.50	$136,500
	f) 4-ft. Post & Rail or Wildlife Fence	LF	3,900	$11.00	$42,900
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	3,900	$4.00	$15,600
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF		$700.00	$0
	j) 10-ft-wide Pedestrian Bridge	LF		$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF	4	$2,000.00	$8,000
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS		$10,000.00	$0
	Trailhead Parking & Improvements (10 cars)	LS		$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$304,200
	Plus 15% Contingency				$45,700
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$349,900
	Engineering Design - 15%				$52,500
	CEQA/NEPA & Permitting - 8%				$28,000
	Construction Management, Surveying, & Staking - 12%				$42,000
	TOTAL (to nearest $1,000)				$472,000

Segment/Description					1,000 LF
7	Mud Slough Levee Trail (East Side of Mud Slough, Fremont Boulevard to Warren)				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Site Work				
	a) Mobilization, Demolition, & Site Preparation (approx. 10%)	LS	1	$28,700.00	$28,700
	b) Grading & Levee Top Improvements	LF	1,000	$10.00	$10,000
	c) Levee Sideslope Stabilization, Erosion Control	LF	1,000	$2.50	$2,500
	d) Sub-base & AC Paving (3 in. x10 ft. section)	SF		$5.50	$0
	e) Sub-base & QF Paving (4 in. x 10 ft section)	SF	10,000	$3.50	$35,000
	f) 4-ft. Post & Rail or Wildlife Fence	LF		$11.00	$0
	g) 6-ft. Chain Link Security Fence	LF		$16.00	$0
	h) Landscaping/Habitat Restoration	LF	1,000	$4.00	$4,000
	i) 10-ft-wide Causeway/Boardwalk - Pedestrian	LF	300	$700.00	$210,000
	j) 10-ft-wide Pedestrian Bridge	LF	0	$1,800.00	$0
	k) Benches, Site Furnishings, Signage (costs per 1,000 LF)	KLF		$2,000.00	$0
	l) Overlook w/ Interpretive Panels - Wayfinding	LS	1	$15,000.00	$15,000
	m) Miscellaneous				
	Street Crossing Improvements (allowance)	LS	1	$10,000.00	$10,000
	Trailhead Parking & Improvements (10 cars)	LS		$25,000.00	$0
	Bikeway Signage, Striping, Stencil	LF		$20.00	$0
	Segment Subtotal				$315,200
	Plus 15% Contingency				$47,300
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$362,500
	Engineering Design - 15%				$54,400
	CEQA/NEPA & Permitting - 8%				$29,000
	Construction Management, Surveying, & Staking - 12%				$43,500
	TOTAL (to nearest $1,000)				$489,000

Segment/Description					4,200 LF
8*	Fremont Boulevard to Dixon Landing Road (Santa Clara County) Levee Top Shoreline Trail				
Segment Cost					
Item No.	Description	Unit	Est. Qty.	Unit Price	Total (rounded up to $100)
1	Mobilization/Habitat Protection	LS	1	$25,000.00	$25,000
2	Prepare and Implement Erosion Control Plan and SWPPP	LS	1	$10,000.00	$10,000
3	Clear and Grub Levee Trails	LS	1	$5,000.00	$5,000
4	Site Demolition, Erosion Control, and Revegetation				
A	Remove Existing Tree at Dixon Landing Ramp	EA	2	$500.00	$1,000
B	Enhancement/Mitigation Planting	LS	1	$12,000.00	$12,000
5	Earthwork and Grading				
A	Grading 5% Ramp, Dixon Landing Rd. to Coyote Levee Rd.	CY	450	$40.00	$18,000
B	Subgrade Preparation of Levee Surface	LF	3,400	$5.00	$17,000
C	Biotechnical Stabilization, Coyote Levee Slopes	LF	2,100	$50.00	$105,000
D	Repair Minor of Slips Coyote Levee	LF	200	$100.00	$20,000
E	Construct Bridge Abutments for 110' x 10' Pedestrian Bridge	EA	2	$20,000.00	$40,000
6	Surfacing and Paving				
A	Furnish & Install 4" Stabilized QF 10' Levee Trail Section	LF	4,200	$35.00	$147,000
B	Asphalt Concrete Paving 5% Ramp	SF	2,500	$4.00	$10,000
7	Furnish & Install 14' Single-Swing Pipe Gate	EA	3	$4,000.00	$12,000
8	Furnish & Install Grates for Drainage Structures; Misc. Drainage Improvements	EA	5	$1,000.00	$5,000
9	Furnish & Install 110' x 10' Pre-Engineered Steel Bridge	LS	1	$120,000.00	$120,000
10	Carpentry and Woodwork				
	Construct 3' Retaining Wall at Dixon Landing Rd. Ramp	LF	250	$180.00	$45,000
11	Site Furnishings and Signage				
A	Furnish & Install Trail Sign and Post	EA	6	$500.00	$3,000
B	Furnish & Install No Trespassing Signs	EA	5	$50.00	$250
C	Furnish & Install Benches	EA	2	$2,500.00	$5,000
D	Fencing - T-post & Twisted Wire	LF	4,900	$6.00	$29,400
12	Dixon Landing Rd. Intersection Improvements (Ped. Signal, Curb Ramps, Signage, & Striping)	LS	1	$40,000.00	$40,000
	Segment Subtotal				$669,650
	Plus 15% Contingency				$100,500
	SUBTOTAL CONSTRUCTION (includes 15% contingency)				$770,150
	Engineering Design - 15%				$115,600
	CEQA/NEPA & Permitting - 8%				$61,700
	Construction Management, Surveying, & Staking - 12%				$92,500
	Biological Monitoring - 5%				$38,600
	TOTAL (to nearest $1,000)				$1,079,000

* This segment could potentially be implemented by developer as part of project approval by City of Fremont.