

CV Link

Proposal:

Slow Project down.

Until:

- A complete analysis of operation and maintenance costs (O+M) have been accurately projected.
- A complete analysis of security costs taking into consideration:
 - Police involvement
 - Lighting
 - Other security concerns
- Each city approves a route through their city.
- Determine funding of O+M costs and security costs. As part of that, determine if cities are willing to pay any costs.
- A legal opinion has been given regarding use of Measure A funds.

- A meeting involving all mayors, city managers, finance directors, city council members and public works directors to review CV link proposal has taken place.

Agenda should include:

- Route through each city.
- Estimated costs of O+M and security.
- Funding fro O+M costs.
- Legal opinion regarding use of Measure A funds.
- Revised costs estimate for project.

Additional Information or Questions:

- Effect on CV link if Salton Sea issues are not resolved.
- What is use of link estimated to be? Seasonal? Year round?
- Safety concerns regarding bicyclists, pedestrians and carts using same path.
- Consequences on not allowing carts on path.
- Insurance issues.

Indian Wells City Council
Staff Report – City Manager’s Office

May 21, 2015

*Mayor and city manager for
their next CVAG Executive
Committee meeting re: CV Link.*

Coachella Valley Link (CV Link) Operations and Maintenance

RECOMMENDED ACTIONS:

City Council discuss Coachella Valley Link (CV Link) and provides **DIRECTION**.

DISCUSSION:

The Coachella Valley Association of Governments (CVAG) continues its progress on the CV Link. Attachment A is a Status Report as of April 29, 2015. The report was presented at the CVAG Technical Advisory Committee (TAC). TAC modified the report to include recent direction, by the CVAG Executive Committee to agendize a discussion of appointing a subcommittee (the modifications are not yet included in the report).

Several significant issues have yet to be resolved including Operations and Maintenance costs projects and funding plans. Various CVAG Committees including the Executive Committee are discussing those issues.

- CVAG Public Safety is reviewing security and safety plans.
- CVAG Transportation is analyzing the Operations and Maintenance program.
- A proposed subcommittee of Council Members and City Managers will be tasked with reviewing funding alternatives.
- CVAG Executive Committee is reviewing all of the areas of CV Link.

Indian Wells has supported an inclusive public process for the CV Link. Staff recommends the City Council support an engagement process including Council Members from each City to discuss the issues associated with the Operations and Maintenance program and create a collective solution.

This effort needs to be supported by reliable information, available to all parties for the public process to be a success. The agenda for the process should include a discussion of the service levels for the Operations and Maintenance program, as well as associated costs. The process needs to include a Legal analysis on the various funding alternatives to insure compliance with the applicable regulations. Consistent with the City’s conservative financial practices Operating and Maintenance Costs should be refined and funding secured before the project moves forward.

Information on the CV Link is available at www.coachellavalleylink.com. CVAG reports that the project design is at 10% complete. There has been little discussion of potential routes through Indian Wells. The draft plan includes two routes for study, one along Highway 111 and the other in the Whitewater Wash. Potential routes will be reviewed in the future with CVAG and the community.

FISCAL IMPACT:

CVAG has estimated operations and maintenance costs at \$1.6 million. There is no funding plan in place and no distribution as to City responsibility. CVAG has explored a plan that would include a portion of the future growth in TOT to fund operations and maintenance. There have been no approvals of such a plan.

ITEM 6C.4

**Coachella Valley Association of Governments
Technical Advisory Committee**

May 11, 2015

Staff Report



Subject: CV Link Status Report

Contact: LeGrand Velez, Transportation Program Manager (lvelez@cvag.org)

Recommendation: Receive and File

Background: Below is the latest status report of the CV Link project as of April 29, 2015:

1. The planning, design, and engineering contract was executed on March 18, 2015. Deficiencies identified in the Caltrans Conformance Letter have been addressed and responses placed on file. A Consultant Checklist was submitted to the Caltrans District 8 Local Assistance Engineer (DLAE) on April 3, 2015.
2. The environmental services contract was executed on April 2, 2015. A Consultant Checklist was submitted to the Caltrans District 8 Local Assistance Engineer (DLAE) on April 28, 2015.
3. A draft final version of the CV Link Master Plan has been prepared. The three volume document is available for review on the CVAG website. Revisions are being made to accommodate comments by the City of Rancho Mirage. Once revisions are completed the document will be reviewed and approved through the CVAG committee structure.
4. The CV Link Project received two American Advertising Awards (Addys) at the Ad Fed Desert Awards Banquet on March 21, 2015. The CV Link website won a silver Addy. The CV Link video won a gold Addy, and will go on to compete at the district level. The California Association of Public Information Officials (CAPIO) gave the CV Link Video an Award of Distinction at their 2015 Annual Conference on April 15, 2015. The awards are on display at the CVAG office.
5. The California Traffic Control Devices Committee (CTCDC) reviewed the non-standard traffic control devices/signs that are proposed in the Neighborhood Electric Vehicle (NEV) Transportation Plan at their March 5, 2015 meeting. All traffic control device proposals were either approved as proposed, approved as modified by CTCDC, or determined to be previously authorized. The NEV Plan was submitted to the Riverside County Technical Advisory Committee (RCTC) on March 25 for review. The CVAG Public Safety Committee will review the NEV Plan at their meeting on June 8.
6. On January 20, 2015, the Desert Hot Springs City Council approved a resolution in support of the CV Link Project. City staff were directed to work with CVAG to identify a preferred alignment for CV Link in Desert Hot Springs. Desert Hot Springs conducted

CV Link public outreach meetings on February 26, 2015 and March 2, 2015. CVAG staff participated in the outreach meetings.

7. Two Health Impact Assessment (HIA) workshops were conducted on March 19, 2015: an afternoon workshop in Palm Desert and an evening workshop in Coachella. The consultant team presented preliminary research findings and received input from the public. A final report and recommendations will be prepared.
8. Public outreach continues through the project website, social media, presentations and special events. Recent events where CV Link sponsored an information booth include the 2nd Annual Ford Falcon 5k at the Living Desert (2/21/15), Cathedral City Movies at Panorama Park (2/28/15), 16th Annual Walk to End Alzheimer's & Health Fair at Palm Desert Civic Center (3/14/15), and the Palms Springs Neighborhood Involvement Committee Picnic and Expo (3/28/15). Recent presentations include the Coachella Valley Hiking Clubs (2/24/15), the Desert Health Care District (2/24/15), the Palm Springs Board of Realtors (2/25/15), the Friends of CV Link (3/5/15), the Indian Wells Community Development Department, the Riverside County Active Transportation Network (4/1/15), the Palm Desert Parks Commission (4/7/15), the Palm Desert Chamber of Commerce (4/14/15), the Coachella Valley Water District Board of Directors (4/14/15), the 29 Palms Band of Mission Indians Tribal Council (4/15/15), the American Council of Engineering Companies Riverside-San Bernardino Chapter (4/16/15), the Greater Palm Springs Convention and Visitors Bureau (4/22/15), and the Safe Routes to Schools Coachella Valley Coalition (4/28/15). A public workshop focused on alignment alternatives through Rancho Mirage was held at the Rancho Mirage Library on April 6th.
9. The CV Link video is being shown at multiple outlets and has been positively received. In addition to the original two minute video, a newer, 30-second video has been prepared in both English and Spanish. They are being shown at various movie theaters in the advertising spots before movies and as a public service announcement (in English and Spanish) on various television channels.
10. The CV Link Public Outreach Program, which was funded through a grant from Caltrans, has been completed. A Final Report was prepared and submitted to Caltrans. Outreach materials, including the promotional video, were financed through this grant. The CV Link Fact Sheet and FAQ Sheet were updated in English and Spanish at the close-out of the grant funded program.
11. CVAG staff was approached by representatives of the Cabazon Band of Mission Indians (BMI) regarding the CV Link Project. A Casino Loop connector is included in the Master Plan. Cabazon staff expressed interest in advancing plans for the Casino Loop, informed CVAG of an existing undercrossing of Interstate-10 on their land, and indicated that federal Bureau of Indian Affairs transportation funds are available to cover costs. CVAG staff then met with the 29 Palms BMI and the City of Coachella regarding the Casino Loop. All parties are interested in collaborating to construct the Casino Loop.
12. CVAG staff is preparing to submit Active Transportation Program (ATP) grant applications for several spurs to the core project. Staff received authorization to spend up to \$40,000 on technical assistance for the grant applications.
13. Phase I Project construction is expected to begin in 2017.

CV Link

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- Consequences on not allowing carts on path.
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COACHELLA VALLEY ASSOCIATION OF GOVERNMENTS

73-710 Fred Waring Dr., Suite 200, Palm Desert, CA 92260 · (760) 346-1127 · www.cvag.org



June 17, 2015

Mr. Wade McKinney
City Manager, City of Indian Wells
44-950 El Dorado Drive
Indian Wells, CA 92210-7497

RE: Local Operations and Maintenance Costs for Bike, Pedestrian & Golf Cart Facilities

Dear Mr. McKinney,

In an effort to refine future operations and maintenance (O&M) costs for the CV Link Project, the Coachella Valley Association of Governments (CVAG) Executive Committee is asking each jurisdiction to provide their respective budgets for operating and maintaining their existing bike, pedestrian and golf cart infrastructure. To facilitate the provision of these data, the Indian Wells existing conditions information collected for the 2015 update to the CVAG Active Transportation Plan (ATP - formerly the Non-Motorized Transportation Plan) is provided. Specifically, CVAG requests the following actions: 1) Review the existing conditions data for your jurisdiction and inform CVAG if any information is inaccurate or missing; and 2) Research your jurisdiction's annual O&M costs for the facilities identified on the Active Transportation existing conditions map.

In addition, the O&M Costs Section of the CV Link Draft Master Plan, and supporting data used to develop the cost estimate, are provided. This information was developed by Alta Planning + Design, the premier bicycle infrastructure planning firm in the United States. At the May 4th Transportation Committee Meeting it was suggested the committee members that the ranger positions could be filled by volunteers rather than paid (contracted) staff. Based on this potential staffing reduction, the two managerial positions proposed in the Master Plan O&M budget were replaced with a half-time CVAG employee who is already in the CVAG budget. The revised annual O&M budget based on the Transportation Committee recommendations is included as an attachment. Your City's feedback on the CV Link O&M estimates are requested and appreciated, especially if you have experience with similar bike paths and trails.

Please submit the requested information by July 1, 2015, to LeGrand Velez, CVAG Transportation Program Manager. After the local O&M data and CV Link O&M estimate feedback are received, CVAG will prepare a summary report by mid-July, and convene a regional meeting to review CV Link O&M cost projections.

Thank you for your assistance.

Sincerely,

for Tom Kirk
CVAG Executive Director

Attachments: Indian Wells ATP Existing Conditions Map
Draft CV Link Master Plan Operations and Maintenance Costs Section
CV Link O&M-Cost Estimate Development Supporting Data
O&M Budget Estimate Incorporating Transportation Committee Recommendations

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8.7 Operational and Maintenance Costs

COST ESTIMATE INFLUENCES

Maintenance costs are variable across organizations and places. Many maintenance needs are unpredictable and completed "as needed." These costs are context dependent and can include items such as charging station replacement and concrete surface rehabilitation, which are less regular. However, some activities are routine and can be regularly planned. Some of the factors that affect per mile operations and maintenance costs can include the following:

- Degree to which costs are borne by existing park and landscape maintenance budgets
- Intensity of use, development and associated amenities
- Whether periodic renewals (i.e., resurfacing) is included or part of another budget
- Degree to which volunteers contribute to minor maintenance activities
- Context such as cost of living in the area and environmental conditions such as extreme temperatures

Operational expenditures are difficult to predict, as there are few facilities similar in scope to CV Link. The operational costs have been derived through interviews with city staff, a review of the literature, and consideration of CV Link objectives.

The maintenance estimate has been developed based on seven overcrossings and channel bridges proposed as part of the initial major construction phase:

- Cathedral Canyon Channel West
- Cathedral Canyon Channel East
- Thunderbird Channel
- Magnesia Canyon Channel
- Cook Street Overcrossing
- Fred Waring Drive Overcrossing
- La Quinta Channel

STRUCTURES COSTS

The Life-Cycle Cost of the proposed overcrossing structures has been estimated in two parts:

- Cyclic Maintenance Cost:** washing and sealing of deck surface, cleaning bridge expansion joints, and cleaning bridge bearings, and these are performed more frequently than the condition-based maintenance. While the routine maintenance is not mandatory, it is recommended to perform these operations to help preserve the original condition of the bridge, and also to prevent deterioration of the bridge condition that would lead to more costly repairs in the future
- Condition Based Rehabilitation Cost:** operations such as deck resurfacing, replacement of bridge rail/fence, replacement of bearings, etc., only required if the condition of a particular component has deteriorated to an unacceptable level. Typically these costs are funded through annual reserve contributions.

In view of scarce data/literature available pertinent to the life-cycle cost estimates for bicycle and pedestrian overcrossing structures, engineering judgment coupled with the following limited resources has been used in the cost estimate:

- FHWA Bridge Preservation Guide, August 2011
- NCHRP Report No. 713 - Estimating Life Expectancies of Highway Assets (Vol. 1: Guidebook & Vol. 2: Final Report), 2012
- Cal Poly report on "Concrete Bridge Deck Crack Sealing: An Overview of Research", May 2006
- Caltrans Contract Cost Data, 2012 and 2013

While the focus of these resources are highway bridges, the same data with some modifications could be used for CV Link since maintenance of many of the activities noted above are results of thermal and other environmental factors rather than load on the structure.

Recognizing that the wear and tear for CV Link is less than that of highway bridges, the recurrence intervals for the maintenance of each of the components has been lengthened. Moreover, CV Link overcrossing

maintenance would not require extensive temporary traffic management and mobilization would be quicker, the Caltrans Cost Data unit prices have been reduced by 20%. This reduction is based on the assumption that materials account for 60% of the total cost, and the labor and equipment combined the remaining 40%. Including the full 60% material cost and half of the labor and equipment cost yields the 80%

In order to estimate the life-cycle cost of the structures (assuming 75 years design life), an escalation rate of 3% per year for over 37 years (mid-point of design life) was used assuming half of the number of occurrences happen before, and the other half after the mid-point of service life of the structure.

TABLE 22: STRUCTURES MAINTENANCE COST ESTIMATE

Item	Time interval (years)	Cost over 75 Years	Cost per year
Cyclic / Routine Maintenance			
Deck cleaning	3		
Deck sealing	25		
Expansion joint cleaning	10		
Bearing assemblies cleaning	15		
Total cost (cyclic)		\$373,565	\$14,900
Condition-based Rehabilitation Maintenance			
Deck resurfacing	50		
Expansion joint replacement	25		
Bearing replacement	50		
Railing refinishing	25		
Shade structure fabric and fencing replacement	40		
Superstructure cleaning and painting	25		
Total cost (condition-based)		\$1,020,157	\$40,640

UTILITIES COSTS

The operational costs due to power consumption have been estimated and are summarized in Table 23. Energy costs are expected to be minimal, as CV Link will include solar power generation on the shade structure roofs.

TABLE 23: CV LINK POWER CONSUMPTION ESTIMATE

Description	Quantity		Electrical Power		
	Number	Unit	kW Load	Total kW Load	Total kWh
Shade structure lighting	42	ea.	0.15	6.30	18,396
Shade structure power	42	ea.	0.18	7.56	22,075
8 kW solar system / shade structures	42	ea.			
Device charging receptacles	42	ea.	0.18	7.56	22,075
Wifi equipment / shade structures	42	ea.	0.05	2.10	6,132
Security camera / shade structures	42	ea.	0.05	2.10	6,132
240V cart charging station / shade structures	42	ea.	1.00	42.00	122,640
Big belly trash system	200	ea.	0.50	100.00	292,000
Bollard lighting	200	ea.	0.04	7.00	20,440
Light tubes	200	ea.	0.50	100.00	292,000
In-ground traffic counters	42	ea.	0.10	4.20	12,264
Traffic volume display poles	2	ea.	0.20	0.40	1,168
Restroom building lighting & dryers	4	ea.	0.36	1.44	4,205
Electrical meter pedestals	42	ea.			
Lighting control system	42	ea.			
Sub-total			3.31	280.66	\$19,527
			kW Load	Total kW Load	Total kWh
					819,527
2 kW solar system energy production	42	ea.	8	336	735,840
Project sub-total					83,687
			Cost of power		\$0.15
			Total annual energy cost		\$12,553.08
			Total monthly energy cost		\$298.88

OPERATIONS AND MAINTENANCE COST ESTIMATE SUMMARY

Based on the capital funding sources outlined in Figure 24 (page 142), the operational cost estimate provided in Table 24 and the range of funding sources that will be utilized or considered (refer to section 8.8, page 155), construction or operations of CV Link will not increase rates.

CONSTRUCTION AND OPERATIONS OF THE CV LINK WILL NOT REQUIRE LOCAL FUNDING

This cost modeling approach assumes that the sweeping, website and web application maintenance, bridge inspections, and condition-based remedial maintenance will be performed by contractors. Existing CVAG staff may perform some of the management, coordination and administrative tasks, but a budget has been allocated for these functions to be outsourced. While this Draft Plan is in review, the personnel requirements and costs will be refined using activity-based models and locally appropriate overhead multiples.

TABLE 24: ANNUAL MAINTENANCE AND OPERATIONS COST ESTIMATE

MAINTENANCE	
Sand and debris removal, sweeping	\$51,900
Concrete repair (periodic renewals)	\$268,700
Re-mark pavement symbols	\$5,800
Re-mark centerline at undercrossings	\$2,600
Re-mark road crosswalks	\$38,400
Sign replacement	\$9,600
Bollard replacement	\$11,000
Gates and fencing	\$10,000
Clearing of drainage channels and culverts	\$15,000
Structures maintenance (cyclic)	\$14,900
Structures maintenance (periodic renewals)	\$40,600
Restrooms	\$20,000
Site Furnishings	\$30,000
NEV lease	\$36,000
Graffiti removal	\$30,000
Lighting maintenance	\$30,000
Landscaping	\$250,400
SUBTOTAL MAINTENANCE	\$864,900
MAINTENANCE PER MILE	\$18,000
OPERATIONS	
Energy cost	\$12,600
Water cost	\$16,300
Promotional material printing and distribution	\$7,500
Website, social media and applications	\$10,000
Events	\$30,000
Management and administration, dispatch	\$122,500
Rangers - 1 foreman and 9 rangers	\$553,100
SUBTOTAL OPERATIONS	\$752,000
OPERATIONS PER MILE	\$15,600
TOTAL MAINTENANCE AND OPERATIONS	\$1,616,900
TOTAL PER MILE	\$33,600

CV Link Operations and Maintenance Cost Estimate



Alta Project Number 2015-003
 Client Project Number CVL-2015-0309
 Workbook Last Updated 6/11/2015
 Alta Planning + Design George Hudson, PLA, Project Director

georgehudson@altaplanning.com

Table of Contents	Description	Key Sources
1 Documentation	This tab As presented in the Master Plan; with links to the detailed sheet; note that the value shown here is lower than that in the Master Plan due to decreased pavement rehab costs.	
2 Estimate Summary	Linked to the tabs to the right as described in the target sheet column G.	
3 Estimate Detail	55 year analysis period is typical for Caltrans. The spreadsheets in this workbook enable the analysis period to be varied for sensitivity testing purposes. The time-series analysis will be completed for the 30% cost estimate refinement.	http://www.dot.gov/policy-initialives/tiger/tiger-bca-guidance http://bca.transportationeconomics.org/
4 Operations Tasks	A matrix of potential duties as presented in Master Plan Table 21 on page 150	
4 Labor Rates	Drives labor values in the Estimate Detail; provides sources for the contract rates	GSA Advisor Government Services Administration Exhibit 75 page 85 CVEP Report 2014 Kolha Rao, RBF Consulting (now Baker) http://www.mascosweepers.com/startingbu Aurora Wilson, CVAG
5 Bridges	For the seven bridges in the 2014 Master Plan, annual and periodic costs	
6 Sweeping	Sand removal costs (high estimate) Sand removal costs (low estimate) Fund for replacement of concrete sections damaged due to water district maintenance vehicles and/or storm events (for in channel sections); life cycle cost analysis	Kolha Rao, RBF Consulting (now Baker)
7 Pavement	Information on Pedestrian Path surface materials - this will be refined after receiving the geotechnical report and further investigation into materials such as NaturalPAVE versus stabilized decomposed granite.	Master Plan Appendix Table 14
8 Ped Path	Out of the 105 acres of CV Link, 7.6 acres of desert landscaping is proposed to be irrigated	Jose Estrada, Hermann Design Group
8 Landscaping and Litter	Low light output LED in-pavement lights are solar powered and require no power. 48 shade structures are proposed to have solar panel roofs to generate power for the 110V cell phone, e-bicycle and golf cart chargers and 220V Level 2 Rapid Chargers for Neighborhood Electric Vehicles and upgraded golf carts.	Ralph Raya, MRC Electrical
9 Electricity	Benchmarking against existing trails and selected roadway	Information supplied by Alta staff nationwide
10 Comparison		

This spreadsheet was originally prepared to inform the Master Plan (August 2014). It is a "living" document and will be used to further refine the O&M cost estimate through the 30% design development, including input from the team's geotechnical, pavement specialist, and engineers as well as cost information from city staff.

SUMMARY TABLE

8/7/14

-2

ACTIVITY	ANNUAL COST
MAINTENANCE	
Sand and debris removal, sweeping	\$ 51,900
Concrete repair	\$ 268,700
Signs and pavement markings	\$ 56,400
Fences, bollards and gates	\$ 21,000
Clearing of drainage channels and culverts	\$ 15,000
Bridge structures (cyclic and periodic)	\$ 55,500
Restrooms	\$ 20,000
Site furnishings	\$ 30,000
NEV leases	\$ 36,000
Graffiti removal	\$ 30,000
Lighting maintenance	\$ 30,000
Landscaping	\$ 250,400
SUBTOTAL MAINTENANCE	\$ 864,900
OPERATIONS	
Utilities (electric and water)	\$ 28,900
Events, promotions and website maintenance	\$ 47,500
Management and administration, dispatch	\$ 122,500
Rangers	\$ 553,100
SUBTOTAL OPERATIONS	\$ 752,000
TOTAL MAINTENANCE AND OPERATIONS	\$ 1,616,900
TOTAL PER MILE	\$ 33,600

DETAIL TABLE

8/7/14	Phase 1 Project with 7 bridges and 4 restrooms	Path length	48.1	Precision level	-2
ACTIVITY	ASSUMPTIONS	QTY	UNIT	UNIT COST	ANNUAL COST (rounded)

MAINTENANCE

Pathway

Sand and debris removal, sweeping	Higher of two contract estimates \$18,400 and \$16,600; refer separate estimate tab	1	LS	\$ 51,873	\$ 51,900
Concrete repair (periodic renewals)	40.2 miles of off-street path, 20' width, 50% load factor reduction from \$1.06 per SF, 3% escalation, 75 year service life, 3 occurrences, refer separate tab	1	Yr	\$ 268,700	\$ 268,700
Re-mark pavement symbols	remarking every 5 years, 8 symbols / mi	77	ea	\$ 75	\$ 5,800
Re-mark centerline at undercrossings	remarking every 5 years, 43 crossings * 200' line	1720	LF	\$ 1.50	\$ 2,600
Re-mark road crosswalks	thermoplastic - avg 80'/intersection, 20 at-grade intersections, remark every 5 years	320	LF	\$ 120	\$ 38,400
Sign replacement	10% replacement/yr, 5 signs/mi (wayfinding, regulatory)	24.05	ea	\$ 400	\$ 9,600
Bollard replacement	10% replacement per year, 100 bollards total	10	ea	\$ 1,100	\$ 11,000
Gates and fencing	Allowance for replacement of damaged fences	1	LS	\$ 10,000	\$ 10,000
Clearing of drainage channels and culverts	Annual clearing	50	ea	\$ 300	\$ 15,000
Structures maintenance (cyclic)	Clean bridge deck, expansion joints and bearings	7	ea	\$ 2,130	\$ 14,900
Structures maintenance (periodic renewals)	Resurface deck, replace joints and bearings, refinish railings and shade structures	7	ea	\$ 5,806	\$ 40,600

Access Points

Restrooms	Four restrooms not close to existing park or commercial facilities. Cost source: Palm Springs Maintenance contract; inflated to account for higher probability of vandalism	4	ea	\$ 5,000	\$ 20,000
Site Furnishings	Repair / replace furnishings such as damaged drinking fountains, bike racks, identity monuments				\$ 30,000

CONTRACTS

NEV lease	Annual lease including maintenance	12	ea	\$ 3,000	\$ 36,000
Graffiti removal	Contract allowance	1	LS	\$ 30,000	\$ 30,000
Lighting maintenance	Contract allowance	1	LS	\$ 30,000	\$ 30,000

LABOR RATES TAB**RANGERS**

Role	Supervisor	Foreman	Laborer I
Burdened rate/hr	\$ 55	\$ 40	\$ 25
Hours per year	2087	2087	2087
Rate per year	\$ 114,785	\$ 83,480	\$ 52,175
Number of staff	0	1	9
	\$ -	\$ 83,480	\$ 469,575
Total	\$ 553,055		

LANDSCAPING

Role	Supervisor	Foreman	Laborer II
Burdened rate/hr	\$ 55	\$ 40	\$ 20
Hours per year	2087	2087	2087
Rate per year	\$ 114,785	\$ 83,480	\$ 41,740
Number of staff	0	1	4
	\$ -	\$ 83,480	\$ 166,960
Total	\$ 250,440		

Sources

Ranger services are a similar labor category to landscaping; average Riverside county weekly wages for landscaping services - \$491/wk - source: California Employment Development Department, 2013 figures

http://cvep.com/content-files/CVEP_2014_AnnualReport.pdf

https://www.gsaadvantage.gov/ref_text/GS21F033AA/GS21F033AA_online.htm

administration/fact-sheets/computing-hourly-rates-of-pay-using-the-2087-hour-divisor/

OPERATIONS TASKS

Task (based on Table 21 in the Master Plan)	Volunteer	Contract Staff	Other Contract?
Inspections - daily routine inspections (this is to identify maintenance needs where they would call out specialist contractors)	Maybe	Yes	Parks & Open Space contract staff
Inspections - detailed seasonal inspections (4 times / year) - a systematic audit of facilities	No	Yes	CVAG staff
Toilet maintenance	No	Yes	Parks & Open Space contract staff
Trash pickup when the Big Belly solar units send out a "full" message	No	Yes	Parks & Open Space contract staff
Minor debris removal	Adopt a Trail program	Yes	Sweeping
Maintaining and/or moving the shade structure modular components (CCTV cameras, if provided; WiFi base stations, including rebooting if needed; downlights)	No	Yes	
Bollard maintenance	No	Yes	
Refreshing count equipment batteries yearly; downloading count data if GSM modems are not used	No	Yes	
Culvert inspection	No	Yes	
Any hardcopy pamphlets or information that is put out at access points	Yes	Yes	
Graffiti removal	Yes	Yes	
Event programming	Yes	Yes	
Tour guides	Yes	Yes	
Stakeholder suggestions:			
1			
2			
3			



PROJECT : CV Link
 CLIENT :
 JOB NO. : 133750

Prepared By: KSR Date: 5/9/14
 Check By: BRM Date: 5/9/14

CV LINK OVERCROSSINGS O & M COST

CV Link Bridge (Overcrossing) Details

Structure Name	Structure Type	Bridge			Approach Ramp	
		L (ft)	B (ft)	A (sf)	Lw (ft)	A (sf)
Cathedral Channel West	CIP Box Girder with Pier	240	23	5,520	0	-
Cathedral Channel East	CIP Box Girder with Pier	120	23	2,760	0	-
Thundersbird Bridge Widening	Steel Truss	100	23	2,300	0	-
Magnesia Canyon Channel	CIP Box Girder with Pier	120	23	2,760	400	9,200
Cook Street OC	CIP Box Girder with Column	300	23	6,900	233	5,359
Fred Waring Dr OC	CIP Box Girder with Column	280	23	6,440	494	11,362
La Quinta Channel Bridge	CIP Box Girder with Pier	190	23	4,370	0	-
7		1,350		31,050	1,127	25,921
Total		2,477		56,971		

CV Link Bridge Maintenance Cost Estimate

Description	A (Cyclic)	B (Condition)	(A+B) Cost
Total Cost, A (cyclic)	\$ 373,565		
Total Cost, B (Condition based)		\$ 1,020,157	
Total Cost for 75 years based on 2012/2013 cost index	\$ 373,565	\$ 1,020,157	\$ 1,393,722
Total Cost at Mid Point of Service Life (Le 37 years, Year=2050), @ 3%/yr Inflation over 37 years	\$ 1,115,176	\$ 3,045,400	\$ 4,160,576
Total Bridge+Ramp Length, (ft)	2,477	2,477	
Total Trail Length, (miles)	48.1	48.1	
Cost/ft	\$ 450	\$ 1,229	\$ 1,680
Cost/mile	\$ 23,185	\$ 63,314	\$ 86,498
Cost/mile/year	\$ 310	\$ 845	\$ 1,155
Cost/mile/year/structure	\$ 45	\$ 121	\$ 166
Cost/year	\$ 14,911	\$ 40,645	\$ 55,556
Cost/year/structure	\$ 2,130	\$ 5,806	\$ 7,937

CV Link Bridge Maintenance Cost Estimate

Service Life, assumed = 75 years.

Base (if Time Interval) = Database corresponding to Florida DOT from this report is used in the cost estimate. In view of scarce data pertaining to Caltrans, it is deemed representative to Caltrans Bridges and acceptable for the cost estimation purpose for at this preliminary stage.

Maintenance/Repair Item Code	(Caltrans Item Code)	Time Interval (years)	Source (FHWA Bridge Project Manual Ch. 16, NCHRP Report 723 for use with the 2012/2013)	Unit	Unit Cost = 0.80*(Caltrans Cost Index, 2012, 2013)	Amount (for all 7 structures): L (ft), W (ft), A (SF) or Nus			Total Cost (\$) = for 7 Structures (per 2012/2013 Cost Index)				Remarks/ Comments	
						Bridge	Ramp	Basis of amount calculation	Total Amount	Cost per Cycle or Occurrence, C1 (\$) = Per Cycle Quantity x Unit Cost	Nc = No. of occurrences over 75 yr service life	Cost over 75 years, C2 = C1 * Nc		
A. Cyclic/Regular Maintenance														
Wash/Clean Bridge Deck (113225)		1 to 2, Use 3		SF	\$ 0.15	31,050	25,921	total area for all structures, including ramp deck	56,971	\$	8,546	24	\$ 205,096	
Seal Deck concrete surfaces (roads/roadway) (113226)		3 to 15, use 25 years. For Highway Bridges = 1 to 2 Use 10 years		SF	\$ 2.40	31,050	12,961	Assume the deterioration of ramp deck is half of that of bridge deck, and also it is easier to resurface on the ramp deck.	44,011	\$	105,625	2	\$ 211,250	Prepare deck = 50 SF/sf, furnish treating material @ \$50/Gal, Coating = 25 SF/Gal, Treat deck = 50.225/sf * C2 = Cost for all 7 structures, over full service life of 75 yrs.
Clean Expansion Joints (111111)				LF	\$ 15	322	0	assume 2 exp. joints per bridge	322	\$	4,830	7	\$ 33,810	
Clean Bearing Assemblies		2 to 4, use 15		Each	\$ 4,200	1	0	Assume only the steel bridge bearings will need to be cleaned. There is one steel bridge.	1	\$	4,200	4	\$ 16,800	No cost data is available. Assumed 2-person crew, 8 hr effort, 1200/hr/person = \$1000 material.
Total Cost (Cyclic)									\$	123,201		\$	466,956	Cost based on Caltrans Unit Prices
									\$	58,561		\$	373,565	Reduced by 20% to reflect difference between Highway Bridges & and BOC/POCs
B. Condition Based (as-needed)														
Resurface/Refinish Bridge Deck (113226)		50		SF	\$ 20.5	31,050		Total area for all 7 structures	31,050	\$	636,525	1	\$ 636,525	



PROJECT: CV Link
 CLIENT:
 JOB NO.: 133750

Prepared By: KSR
 Check By: BRM

Date: 5/9/14
 Date: 5/9/14

CV LINK OVERCROSSINGS O & M COST

Resurface/Retinish Approach Ramp Deck (153229)	50	SF	\$	20.5		Assume that since the approach ramps are on grade, the maintenance is included in the total maintenance cost.	-	\$		0	\$	
Replace Expansion Joints - Joint Seal (MTR-1*) (519061 - new joint)	25	LF	\$	44	322	0 Assume 2 exp. joints per bridge	322	\$	14,007	2	\$	28,014 Joint seal (mtr-1 *) = \$39/ft. new joint. Assume replace cost = 1.5*New joint cost
Replace Bearings (Elastomeric) (518040)	50	Each	\$	3,000	8	0 Assume only the steel bridge bearings will need to be replaced. There is one steel bridge.	8	\$	24,000	1	\$	24,000
Maintain/Repaint Bridge Railing - use item for paint (500135)	25	LF	\$	29	2,700	2,254 Combined length of the railing. Assume that complete replacement is not required. Only minimal maintenance such as painting etc.	4,954	\$	145,747	2	\$	291,498 Remove Railing = \$100, Reface = \$40, Painting = \$28/lf for the superstructure below. The total area of rail is more than the total length of the rails by inspection. However, using the rail length is considered ok since it is easier to paint rails than steel superstructure.
Remove (500028) & Reconstruct (151540) Shade Structure Fabric/Chainlink Fence	40	LF	\$	31	1,160	Combined length of the fence for two bridges on the roadway only (Cook at and Fred Waring) - Only minimal maintenance - such as painting is needed.	1,160	\$	36,268	1	\$	36,268 Interval is assumed based on judgement. Assume one time expense in bridge service life. Cost is assumed to be 1.5 times the Caltrans standard fence.
Clean & Paint - Bridge superstructure (Spot Blast Clean and Paint Undercoat) (500135)	25	SF	\$	29	4,400	0 There is one steel structure. Assume 4-girders of 48" web x 12" flange. La perimeter = 3*48"+12*12" exposed faces = 132 ft; A=4girders*132*100' long.	4,400	\$	129,448	2	\$	258,896 Paint Life: Generally accepted range is 15 yrs to 20 yrs. \$23 for clean & paint, Saturated \$5 for health and monitoring
Total Cost (Condition based)								\$	985,995	\$	1,275,196	Cost based on Caltrans Unit Prices Reduced by 20% to reflect difference between Highway Bridges & and BOC/PDCL
								\$	784,796	\$	1,020,157	

SWEEPING AND DEBRIS REMOVAL (Per annum)

Prepared by: John Lleswyn
Date: 5/23/14

Approach 1
Number of miles: 48.1
Months where sand is an Issue: 4

Notes
Optional equipment: Ravo 5-Series as used by PDOT
<http://ravo.fayat.com/Products/RAVO-5-Series>
<http://www.mascosweepers.com/startinbusiness/index.shtml#5>

Contract cost per 200 hours: \$ 7,600
Cost per hour: \$ 38

		Peak sand accumulation period	Off-peak period
Time per cycle			
Sweeper speed (mph)	3		
Proportion subject to sand		30%	
Miles subject to sand		14.4	48.1

For frequent peak period cycles only
Time to sweep length of problem areas (hours): 5
Deadhead travel time (hours): 1
Total time per sweep cycle (hours): 6
For full sweep cycles only
Time to sweep full length (hours): 16
Deadhead travel time (hours): 2
Total time per sweep cycle (hours): 18
Number of sweep cycles

CV Link full length divided by sweeper speed

	Hrs/cycle	No. cycles	Frequency	
Peak period / limited length sweep cycles	70	12	3	Sweeping frequency during sand accumulation months - per month
Full sweep cycles	216	12	12	Number of full sweeps per year
Total	286	24		

Total hours of sweeping: \$ 10,873
Total cost of sweeping

Administration (est)	\$ 5,000	Cost per debris location	Number of debris locations	
Debris removal	\$ 36,000	\$ 1,500	24	Assume skip loader needed for 2 days per site undercrossings, channel crossings, cleaned once per year
Total path sweeping cost (p.a.)	\$ 51,873			

	Miles	Frequency	Total Miles
Number of miles for regular callouts	48.1	12	577.2
Number of miles for intensive sand removal	14.4	12	173.2
			750.4

Cost per mile: Aurora Wilson - street sweeping contract for PM10
Total cost per annum: \$22 mitigation \$22/ml per callout
\$16,508

General notes

Note: Sand removal activities may be limited during Nov 1 - Mar 30 or if ambient temperature exceeds 38.9 C (102 F) - BO Conservation Measure - source - Palm Drive I-10 EA Consider delivery of removed sand to Fringe Toad Lizard habitat area (USGS report), at extra cost
Palm Springs - 11 callouts to Gene Autry / Train Bridge during month of June 2012; note that CV Link is not so exposed

<http://www.palmspringsca.gov/Modules/ShowDocument.aspx?documentid=24455>

PAVEMENT

1. CV Link - Pavement Cost Comparison Per SF

2/19/14

By:

KSR



FOR BIKE / LSEV PATH COMPONENT ONLY

KEY INPUTS	Analysis Period (years)=	75	
	Path Length (mi)=	40.2	212,265 ft
	Bike / LSEV Path Width (ft)=	14	Does not include on-street lanes

	Unit Price	Quantity	SY/in	Ton/SF	Cost (\$/SF)	
	(Caltrans 2012 Price Index)	L (ft)	W (ft)	T (in)	V (cf)	V (CY)
A. Rigid Pavement						
Concrete Pavement (401000)	\$ 250.00 \$/CM					
	\$ 191.11 \$/CY	1.00	1.00	6.00	0.50	0.02
Class 2 Aggregate Base, 260200	\$ 26.00 \$/CY	1.00	1.00	8.00	0.67	0.02
						\$ 4.18
B. Flexible Pavement (HMA)						
Hot Mix Asphalt, Type A (390132)	\$ 100.00 \$/ton	1.00	1.00	4.00	0.44	0.03
Class 2 Aggregate Base, 260200	\$ 26.00 \$/CY	1.00	1.00	8.00	0.67	0.02
Class 2 Aggregate Subbase, 250101	\$ 18.00 \$/CY	1.00	1.00	0.00	0.00	0.00
						\$ -
						\$ 3.20

C. Total Cost (Initial + Maintenance)

	Concrete	Asphalt	Remarks
1. Initial cost (\$/SF)	\$ 4.18	\$ 3.20	Asphalt includes load conversion factor 0.0575
2. Maintenance			
Replace Asphalt Concrete Pavement	\$ 1.06	\$ 1.42	@ \$230/CY, Item Code, 390095
Interval of Maintenance	45	15	
No. of Occurrences over analysis period	0.67	4.00	
Total maintenance Cost over (years)	\$ 0.71	\$ 5.68	
Total Cost (Initial + Maintenance)	\$ 4.89	\$ 8.88	assuming 2" Asphalt is removed
		\$ 6.04	assuming 1" Asphalt is removed

Percent Difference

31% % higher for concrete initial cost

47% % lower for concrete over a 75 year period, capital and operational

13 % lower for concrete over a 25 year period, capital and operational

2. CV Link - Pavement Cost Comparison Over Analysis Period

FOR BIKE / LSEV PATH COMPONENT ONLY

Unit Cost	Quantity/Ft	Total Quantity	Cost (\$/occurrence)	Rate of	No. of	Total Cost Over Service Life

S. No	Item Description	Item Code	Unit	Unit Cost (Caltrans 2012 cost index)	Unit Cost (USE)	(L ft)	W (ft)	T (ft)	L (ft), A (sf or sqyd) V (cf or CY) per LF	for CV Link bike/LSEV path	per LF	For full length of CV Link	Cycle (1) or As Needed (2)	maintenance (yrs) (Source, NCHRP 731, and Purdue Univ. report)	Occurrences over analysis period	(\$/analysis period in years)
Asphalt																
1	Seal Pavement Joint	404092	LF	\$ 2.25	\$ 2.50	14	1	1	14	198,113.55	\$ 35.00	\$ 495,284	1	8	9	\$ 4,457,555
	Seal Concrete Pavement Joint (Silicone)	413117	LF	\$ 0.10	\$ 0.10											
2	Seal pavement Cracking (assuming same as bridge deck)	(153225/540 108/540102)	SF	\$ 2.40	\$ 2.00	14	1	1	14	2,971,703	\$ 28.00	\$ 5,943,407	10			
2	Wash/Clean Concrete Pavement (assume same as cleaning bridge deck)	153235	SF	\$ 0.15	\$ 0.08	14	1	-	14	2,971,703	\$ 1.05	\$ 222,878	1	3	24	\$ 5,349,066
Concrete																
3	Remove Concrete Pavement	153140	SQYD	\$ 16.1	\$ 17	14	1	-	1.56	330,189	\$ 26	\$ 5,613,217	2	40	1	\$ 5,613,217
4																
5																
6																
7																
8																
9																

Assumptions

Design life of California concrete pavements = 40 years; assumed that with minimal usage by heavy vehicles we will get slightly longer life (45 years)

Assumed Joint spacing = 15 ft (13.5 ft per Caltrans HDM Table 622.1).

15

3. CV Link - Pavement Maintenance Cost (Concrete)

FOR BIKE / LSEV PATH COMPONENT ONLY

Prepared by: John Lieswyn Planning 9342
 Guidance: Kotha Rao Consulti
 Date: 5/23/14

Item	Unit	Value
Off street length	mi	40.2
Off street length	ft	212,256
Path area	SF	4,245,120
Current index value	SF	\$ 1.06
Load reduction factor		50%
Adjusted cost	SF	\$ 0.53

Length assumes 34 miles of off street path plus concrete repair of CV Link paths alongside roads; does not include existing and proposed on-street lanes

Maintenance interval	Years	45
Service life (Analysis Period)	Years	75
Number of occurrences		3
Escalation		3%
Total cost		\$ 20,149,506
Cost per year		\$ 268,700
Cost per mile		\$ 6,684.08

Linked to input cell C24

Note that original Master Plan called for 3 occurrences over 75 years

Using 1 occurrence, value will drop to \$89,600

formula for cell E669 to be =ROUNDUP(E68/E67-1,0)

Transfer to Estimate Detail Sheet

4. CV Link - Ped Path Life Cycle Cost Analysis

For Pedestrian Path - various materials and same analysis period

Length of ped path (SF):	25,344	4.8 miles
Width of ped path (ft):	6	
Total SF of ped path:	152,064	

Source: Section Types B1, B2, C2, C4, D1, D3, D4 in Table 5 of the Capital Cost Estimate (Volume 2)

Typical width, although it will vary from 4 to 8

	Concrete	Asphalt	S-DG	Natural PAVE XL	Remarks
1. Initial cost (\$/SF)	\$ 4.18	\$ 3.20		\$ 5.50	Asphalt includes load conversion factor 0.0575
2. Maintenance					
Replace Asphalt Concrete Pavement	\$ 1.06	\$ 1.42			@ \$230/CY, Item Code, 390095
Interval of Maintenance	45	15	5	45	
No. of Occurences over analysis period	1	4		14	1
Total maintenance Cost over (years)	\$ 1.06	\$ 5.68	\$ -	\$ -	
Total Cost (Initial + Mantainance)	\$ 5.24	\$ 8.88	\$ -	\$ 5.50	assuming 2" Asphalt is removed
		\$ 6.04	\$ -	\$ 5.50	assuming 1" Asphalt is removed

PEDESTRIAN PATH MATERIALS OPTIONS MATRIX

Product	Description / Installation Method	Life (years)	Maintenance Description	Permeable	Functionality P=Pedestrian S=Skates B=Bikes N=NEV	Initial Cost \$/SF	Maintenance Cost Estimate
Nike Grind – Atlas Tracks	Prepare subbase, place geotextile, 6" aggregate base, apply Nike grind atlas track rubberized surface over base.	8 to 10	Reapply binding agent every 5-6 years. Keep surface clean, dirt and sand wear surface down, full replacement needed after 10 years	Yes	P	\$12.50	
Nike Grind – Rebound Ace	Prepare subbase, place geotextile, 6" aggregate base, pour concrete or asphalt base, apply rebound Ace surface directly over hard surface.	8 to 12	Replace topcoat after 10 years	No	P, S, B	\$10.50	
Permeable Concrete	Prepared subbase, place geotextile, 12" depth aggregate base, Portland cement, coarse aggregate, water. 5" depth section	15	Vacuum sweep and pressure wash 4 times a year	Yes	P, B, N	\$6.00	
Concrete	Prepared subbase, place geotextile, 6" agg. base, Portland cement, aggregate, sand, water 4" depth section	25+	Periodic inspection for uplift and settlement, repair as needed	No	P, S, B, N	\$4.75	
Permeable Asphalt	Prepared subbase, place geotextile, 12" depth aggregate base, emulsion and coarse aggregate 2" depth section	8	Vacuum sweep and pressure wash 4 times a year, patch any pot holes as needed	Yes	P, S, B, N	\$3.50	
Glassphalt	Prepared subbase, place geotextile, 6" agg. base, asphalt with aggregate/glass, 2" depth section	7 to 10	Pothole patching	No	P, S, B, N	\$2.75	
Reground Asphalt	Prepared subbase, place geotextile 6" aggregate base, emulsion recycled asphalt chips 2" depth section	7 to 10	Pothole patching	No	P, S, B, N	\$2.75	
Asphalt	Prepared subbase, place geotextile, 6" aggregate base, emulsion, aggregate	10	Pothole patching	No	P, S, B, N	\$2.75	
Poly Pave	Prepared subbase, place geotextile, 6" aggregate base, grade and shape, mix poly pave in top 2" of base, spray on two top coats of poly pave 2" depth section	5 to 10	Reapply Poly pave solidifier every 1-2 years depending on level of use. Make spot repairs as needed.	No	P, S, B, N	\$2.50	
Chip Seal	Prepared subbase, place geotextile, 6" aggregate base, emulsion, 1/2" – 3/4" aggregate, two coat process	7 to 10	Pothole patching	No	P, B, N	\$2.00	
Decomposed Granite (DG)	3/8-inch particles are ground up and applied over landscape fabric to a depth of 4-6 inches minimum.	5 to 7	Reapply additional material as needed	Yes	P, B, NEV	\$2.00	

NaturalPAVE							
XL Resin	www.sspco.com Merced, CA (800) 523 9992 recommended by Tom to Investigate Solar reflectivity advantages Green Building Council Comfortable surface for runners Could be used for the entire path, not just concrete		one ton covers 80 SF to a 2" depth		Low High Low High	\$475 ton \$650 ton \$5.94 Cost per SF \$8.13	
			No cost - even sustains overtopping				

LANDSCAPING AND LITTER, WATER USE

Water use

Estimated by Jose Estrada **Hermann Design Group** 951-782-9335 6/24/14

Precision level	-2			
SF of landscaped area valley wide	331,920	equal to:	7.6	acres
Water use per SF (gal) best estimate	23			
Water use per SF (gal) maximum	29			

Assumes 50/50 mix of medium and low water use planting and no turf. CVWD Zone 5 Evaporative Transpiration Rate 93.9, and average of \$1.12 (west valley) and \$1.42 (east valley) unit rates per CCF

Water Use Scenario	Water use (gal)	Gals/CCF	CCF	Average CCF Unit rate	Cost per year (rounded)
Water use per year best estimate	7,634,160	748	10,205.39	1.27	\$ 13,000
Water use per year maximum	9,625,680		12,867.66		\$ 16,300

Irrigation Repair

Develop this for the 30% cost estimate. Intent is to provide an alternative method to the contract sum based on labor rates

Litter Removal

Develop this for the 30% cost estimate. Intent is to provide an alternative method to the contract sum based on labor rates

Restroom Maintenance

Develop this for the 30% cost estimate. Intent is to provide an alternative method to the contract sum based on labor rates
 Currently, there is a \$20K placeholder for increased costs of maintaining restrooms that are in addition to those already existing in city parks

ELECTRIC POWER

PROJECT		DATE: May 21, 2014			
CV LINK POWER CONSUMPTION & COST ESTIMATE		ESTIMATED BY: RALPH RAYA			
		STATUS OF DESIGN: PRELIMINARY BUDGETING			
DESCRIPTION	QUANTITY		ELECTRICAL POWER		
	NUMBER	UNIT	KW LOAD	TOTAL KW LOAD	TOTAL KWH
SHADE STRUCTURE LIGHTING	42	ea.	0.15	6.30	18,396
SHADE STRUCTURE POWER	42	ea.	0.18	7.56	22,075
8 KW SOLAR SYSTEM / SHADE STRUCTURES	42	ea.			
DEVICE CHARGING RECEPTACLES	42	ea.	0.18	7.56	22,075
WIFI EQUIPMENT / SHADE STRUCTURES	42	ea.	0.05	2.10	6,132
SECURITY CAMERA / SHADE STRUCTURES	42	ea.	0.05	2.10	6,132
240V CART CHARGING STATION / SHADE STRUCTURES	42	ea.	1.00	42.00	122,640
BIG BELLY TRASH SYSTEM	200	ea.	0.50	100.00	292,000
BOLLARD LIGHTING	200	ea.	0.04	7.00	20,440
LIGHT TUBES	200	ea.	0.50	100.00	292,000
IN-GROUND TRAFFIC COUNTERS	42	ea.	0.10	4.20	12,264
TRAFFIC VOLUME DISPLAY POLES	2	ea.	0.20	0.40	1,168
RESTROOM BUILDING LIGHTING & DRYERS	42	ea.	0.36	1.44	4,205
ELECTRICAL METER PEDESTALS	42	ea.			
LIGHTING CONTROL SYSTEM	42	ea.			
SUB-TOTAL			3.31	280.66	819,527
			KW LOAD	KW LOAD	TOTAL KWH
					819,527
2 KW SOLAR SYSTEM ENERGY PRODUCTION	42	ea.	8	336	735,840
PROJECT SUB-TOTAL					83,687
			COST OF POWER		\$0.15
			TOTAL ANNUAL ENERGY COST		\$12,553.08
			TOTAL MONTHLY ENERGY COST		\$298.88

COMPARISON (BENCHMARKING)

SUMMARY (\$ per mile per year)	Length (mi.)	Annual User Volume	Type	Location	Notes	Source
\$ 1,453	n/a		Asphalt	Michigan	Upper bound average for paved trails	<u>Michigan Trails and Greenways Alliance</u>
\$ 2,525	n/a		Asphalt	Milwaukee County	Average for asphalt path trail maintenance	
\$ 3,500	30.0	178,000	Asphalt	Pere Marquette Trail, Michigan	Upper bound for high maintenance hardscaped trails through urban areas - includes trash removal, toilet maintenance, tree maintenance and invasive species removal, picnic table cleaning, graffiti removal	
\$ 8,500	30.0		Asphalt	Santa Ana River Trail, Southern California	Typically 12' wide; estimate is an approximation as the standard varies along the length and there are various levels of in-kind services provided by volunteers.	
\$ 9,200	55.0		Asphalt	Santa Ana River Trail, Southern California	ESTIMATE for full build out of Santa Ana River Trail. Includes porta potty services, landscaping including weekly trash removal, irrigation, invasive species removal, graffiti removal on asphalt, rocks and signs, street sweeping including ramps (weekly), handyman minor repairs including fencing, signs, etc, 1,300 trees trimmed annually, chemical weed spraying and removal	Tuan Richardson, OC Parks
\$ 9,000	19.0	400,000		Swamp Rabbit Trail, South Carolina	The 19 mile Swamp Rabbit Trail in Greenville SC has no restrooms due to proximity to other non-county facilities and partnerships with businesses. SRT does have county police patrol due to the number of annual users (400k).	
\$ 10,600	2.0			Mill Valley to Corte Madera Trail, Northern California	Cost estimate from the trail Feasibility Study	
\$ 24,000	12.0			East Bay Greenway, Northern California	Cost estimate for the East Bay Greenway based on estimates from contracting firms.	
\$ 29,930	1.0		Concrete	Central Marin Ferry Connector	Class I shared use path in urban setting with ramps and long overcrossing/bridge	
\$ 10,968	Average			Wolf River Parkway	33 miles from Memphis to Collierville - were have completed the master planning and are beginning the construction documentation phase. Similar to CV Link, we are now in the process of working with stakeholders to refine the Initial O&M recommendations and determine the funding mechanisms.	
\$ 9,000	Median			Razorback Greenway	37 miles, grand opening just this past Saturday - economic development corporations, city mayors, tourism agencies	
\$ 28,571				Blue Ridge Parkway, Georgia to Virginia	National Park service 2002 business plan for 525 mi. roads, 350 mi trails, 246 buildings, 123 mi of fences, 26 tunnels, 13 visitor centers, 11 picnic areas and 9 campgrounds.	

Annual O&M Budget with Transportation Committee Recommendations

ACTIVITY	ANNUAL COST
MAINTENANCE	
Sand and debris removal, sweeping	\$ 51,900
Concrete repair	\$ 268,700
Signs and pavement markings	\$ 56,400
Fences, bollards and gates	\$ 21,000
Clearing of drainage channels and culverts	\$ 15,000
Bridge structures (cyclic and periodic)	\$ 55,500
Restrooms	\$ 20,000
Site furnishings	\$ 30,000
NEV leases	\$ 36,000
Graffiti removal	\$ 30,000
Lighting maintenance	\$ 30,000
Landscaping	\$ 250,400
SUBTOTAL MAINTENANCE	\$ 864,900
OPERATIONS	
Utilities (electric and water)	\$ 28,900
Events, promotions and website maintenance	\$ 47,500
Half Time Project Mgr	\$ 51,223
SUBTOTAL OPERATIONS	\$ 127,623
TOTAL MAINTENANCE AND OPERATIONS	\$ 992,523
TOTAL PER MILE	\$ 33,600

Bondie Baker

From: Bondie Baker
Sent: Wednesday, July 01, 2015 11:00 AM
To: 'lvelez@cvag.org'
Cc: Ken Seumalo; Wade McKinney; Mirian Hernandez
Subject: Request for Information (Bike/Ped/Cart Facilities)
Attachments: Existing Facilities Map-Requested Revisions 2015-06-30.pdf

Good morning LeGrand. Per Tom Kirk's request of Wade McKinney dated June 17, we have reviewed the map you provided showing Indian Wells' existing facilities for bicycles, golf carts, and trails. Attached please find a "redline" of said map accurately indicating our existing facilities. For your convenience, we have numbered and described each revision requested. And in regards to the City's annual O&M costs for the existing facilities, we have no data available.

If you have any questions, please contact me or Ken Seumalo. Thank you,



Bondie Baker
Assistant Engineer II

950 Eldorado Drive
Indian Wells, California 92210-7497
www.IndianWells.com
bbaker@IndianWells.com
V (760) 776-0237 F (760) 346-0407

Questions/Issues

- CUAE does not have law enforcement requirements/authority
- Cities have law enforcement responsibilities for CU link
- Presently weight limit on CU link 3,000 lbs.
 - o Fire engines weigh 40,000 – 70,000 lbs. depending on type of fire engine
 - o Paramedic vans weigh 20,000 – 25,000 lbs.
- There will be capital costs for emergency vehicles not on any plan – who pays
- EIR study has not been done
 - o Fire and police cannot give estimate of costs until EIR completed
 - o Who pays for public safety costs – capital/operating costs
 - o Points of access have not been determined
- Nothing has been discussed or budgeted regarding public safety costs:
 - o Lighting issues
 - o Security concerns
 - o Public call boxes
 - o Needs for access by emergency vehicles
 - o Needs for additional patrol hours
 - o Capital expense requirements for specialized equipment, i.e., paramedic vehicles
- What about bathroom needs – how many/where?
- Action plan for criminal activity?
- Combining all uses (see attached) – no plan for enforcement of laws, rules and policies

Indian Wells City Council

Staff Report – City Manager’s Office

DRAFT September 17, 2015

..title

Coachella Valley Link (CV Link)

..recommendation

RECOMMENDED ACTION:

Council discusses Coachella Valley Link (CV Link) and provides **DIRECTION**.

..body

DISCUSSION:

The City Council directed Staff to place the CV Link project on the September 17, 2015 agenda for discussion of routes and funding. The Coachella Valley Association of Governments (CVAG) is the lead agency for CV Link. CVAG staff will present the proposed routes through Indian Wells. Attached are pages of the CV Link 10% Design Plan Set (March 2015), the relevant pages of the Data Table, and the cross-sections information. These three documents depict what is proposed at any given location along the route.

The CVAG Executive Committee, in June, directed their staff to conduct a meeting of all of the cities to discuss Operations and Maintenance costs and funding.

The Mayor asked that the City Council review three issues:

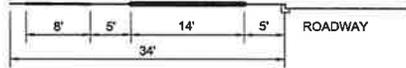
- Are the proposed routes acceptable?
- Is the City willing to spend General Funds on CV Link?
- Is the City willing to spend Measure A Funds on CV Link?

FISCAL IMPACT:

CVAG has estimated operations and maintenance costs at \$1.6 million. There is no funding plan in place and no distribution as to City responsibility.

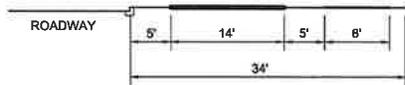
ATTACHMENTS:

1. CV Link Plan Set
2. CV Link Data Table
3. CV Link Cross Sections



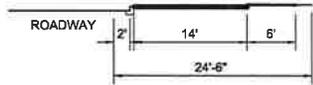
- 5' BUFFERS

A-1 ROAD R/W - LEFT



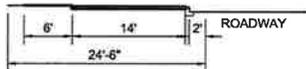
- 5' BUFFERS

A-2 ROAD R/W - RIGHT



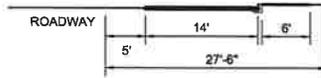
- 2-4" VERTICAL SEPARATION BETWEEN PATHS
- 2' STRIPED BUFFER

A-3 ROAD R/W CONSTRAINED - RIGHT



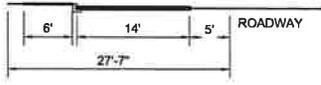
- 2-4" VERTICAL SEPARATION BETWEEN PATHS
- 2' STRIPED BUFFER

A-4 ROAD R/W CONSTRAINED - LEFT



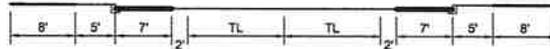
- 5' THERMOPLASTIC HATCHED BUFFER (2' MIN)
- LSEV/CYCLETRACK AT ROADWAY GRADE

A-5 BUFFERED LSEV/BIKE LANE
TWO-WAY ONE SIDE - RIGHT



- 5' THERMOPLASTIC HATCHED BUFFER (2' MIN)
- LSEV/CYCLETRACK AT ROADWAY GRADE

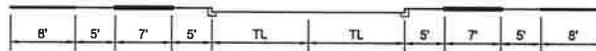
A-6 BUFFERED LSEV/BIKE LANE
TWO-WAY ONE SIDE - LEFT



- 2' THERMOPLASTIC HATCHED BUFFER

A-7 BUFFERED LSEV/BIKE LANES
ONE-WAY EACH SIDE

A-7B AS ABOVE - LIMITED TO RESTRIPE ONLY



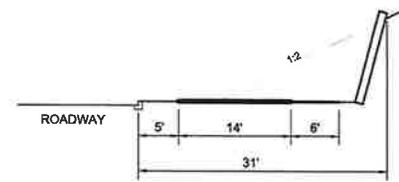
- 5' BUFFERS

A-8 LSEV/CYCLE TRACKS, ONE-WAY EACH SIDE



- LOW VOLUME ROADWAYS 25 MPH OR LESS
- PROVIDE WAYFINDING FOR LSEV/BIKES

A-9 LSEV/BIKE BOULEVARD



- WALL HEIGHT TBD BASED ON EXISTING CONDITION

A-10 ROAD R/W
CONSTRAINED BY TOPOGRAPHY

AT GRADE CROSSING TYPE	LOCATIONS	CURB RAMPS	CROSSWALK	LOOP DETECTOR	ADD PHASE / HARDWARE	PHB / RRFB	NEW SIGNALS
X-1	STOP / YIELD CONTROLLED	Y	Y				
X-1 ES	EXISTING SIGNALS	Y	Y	Y			
X-1 P	EXISTING SIGNALS - ADD PHASE	Y	Y	Y	Y		
X-1 PHB	MID BLOCK PEDESTRIAN HYBRID BEACON OR RRFB	Y	Y	Y		Y	
X-1 NS	NEW SIGNAL	Y	Y	Y			Y

X-1 AT-GRADE CROSSING IMPROVEMENT

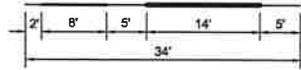
SECTIONS: ON-STREET

SHEET
OF
DWG FILE: NS05WC_#.DWG

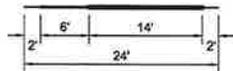
CV LINK - 10% SCHEMATIC DESIGN
COACHELLA VALLEY, CA

Coachella Valley Association of Governments
73-710 Fred Waring Drive, Suite 200
Palm Desert, CA 92260

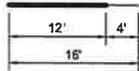
SCALE: AS SHOWN
DATE: MAY 29 2014



B-1 INDEPENDENT R/W

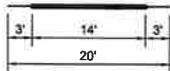


B-2 INDEPENDENT R/W - CONSTRAINED



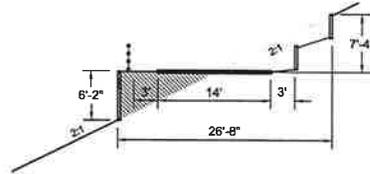
- AT PINCH POINTS OVER SHORT DISTANCES ONLY
- ALL USERS ON SINGLE TREAD
- ZONES DIFFERENTIATED BY PAVING MATERIALS

B-3 CONSTRAINED MINIMUM

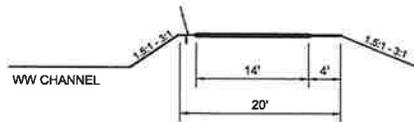


- FOR PATHWAY CONNECTORS, CHANNEL BOTTOM SEGMENTS AND OTHER CONSTRAINED LOCATIONS

B-4 CONSOLIDATED PATH



B-5 SHARED ACCESS PATH/ARTERIAL CONNECTOR
HALF BENCH

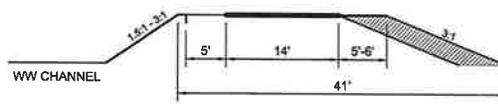


- 3' MIN PEDESTRIAN PATH

C-1 FREE STANDING LEVEE - SINGLE PATH

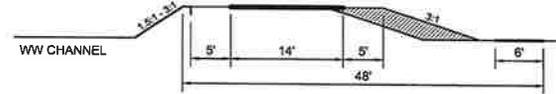


C-2 DOUBLE LEVEE - DUAL PATHS

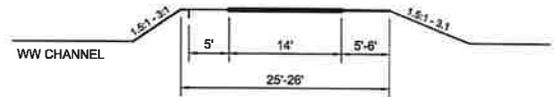


- 5'-6" MIN. PEDESTRIAN PATH

C-3 FREE STANDING LEVEE - SINGLE PATH
BENCH LESS THAN 24'



C-4 FREE STANDING LEVEE - DUAL PATHWAYS
BENCH LESS THAN 24'



- 5'-6" PEDESTRIAN PATH
- BUFFER TO BE ADDED BETWEEN PATHS WHEN LEVEE TOP MORE THAN 25' WIDE

C-5 FREE STANDING LEVEE - SINGLE PATH
BENCH 25' OR MORE

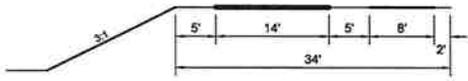


SHEET
 CV
 SCALE: AS SHOWN
 DATE: MAY 29, 2014
 DWG. FILE: NS03WC_0.dwg

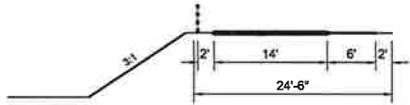
CV LINK - 10% SCHEMATIC DESIGN
 COACHELLA VALLEY, CA
 Coachella Valley Association of Governments
 73-710 Fred Waring Drive, Suite 200
 Palm Desert, CA 92260



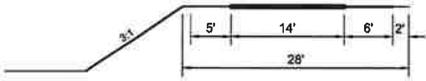
SECTIONS: OFF-STREET 1



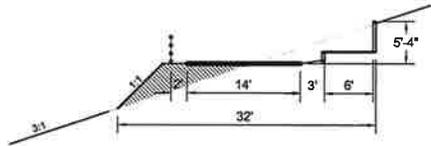
D-1 ADJACENT LEVEE - EXISTING BENCH
UNCONSTRAINED



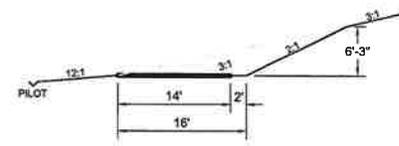
D-2 ADJACENT LEVEE - EXISTING BENCH
CONSTRAINED



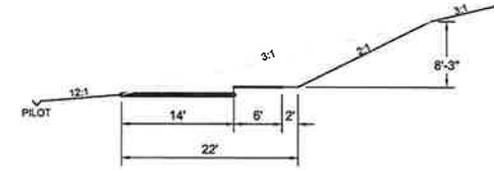
D-3 ADJACENT LEVEE - EXISTING BENCH
MODERATELY CONSTRAINED



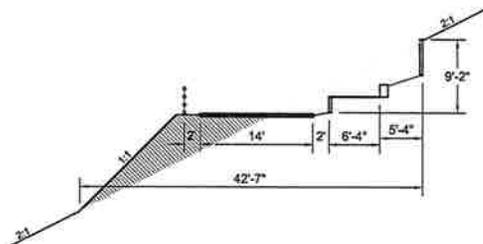
D-4 ADJACENT LEVEE - MIDSLOPE
HALF BENCH CONSTRAINED 3:1 SLOPE



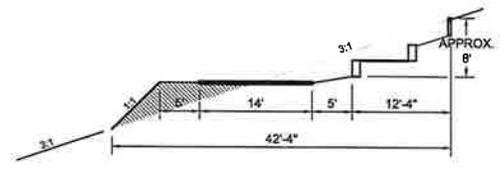
D-5 ADJACENT LEVEE - NEAR BOTTOM OF SLOPE - CONSOLIDATED PATH
FULL BENCH CONSTRAINED VARIABLE SLOPE



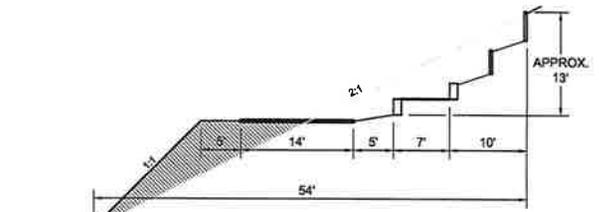
D-6 ADJACENT LEVEE - NEAR BOTTOM OF SLOPE - DUAL ADJACENT PATHS
FULL BENCH CONSTRAINED VARIABLE SLOPE



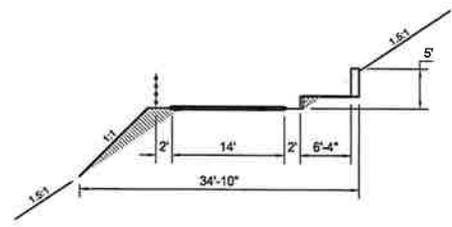
D-7 ADJACENT LEVEE - MIDSLOPE
HALF BENCH CONSTRAINED 2:1 SLOPE



D-8 ADJACENT LEVEE - MIDSLOPE
HALF BENCH UNCONSTRAINED 3:1 SLOPE



D-9 ADJACENT LEVEE - MIDSLOPE
HALF BENCH UNCONSTRAINED 2:1 SLOPE

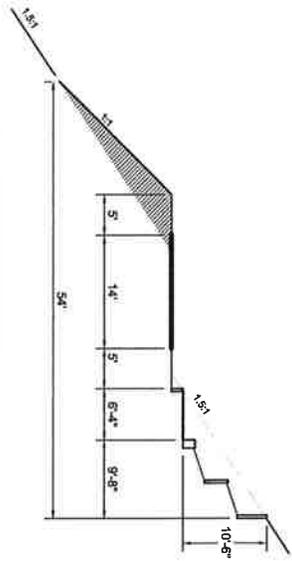


D-10 ADJACENT LEVEE - MIDSLOPE
PARTIAL EXISTING BENCH, CONSTRAINED 1.5:1 SLOPE

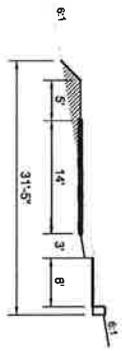
SECTIONS: OFF-STREET 2B

DWG. FILE: HD3HWPC_2.dwg
 DATE: MAY 29 2014
 SCALE: AS SHOWN
 SHEET

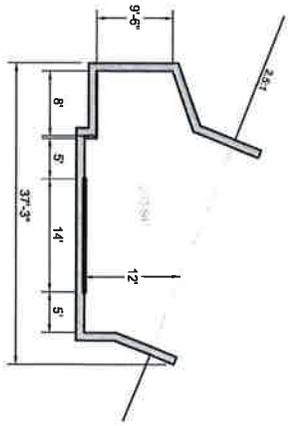
CV LINK - 10% SCHEMATIC DESIGN
 COACHELLA VALLEY, CA
 Coachella Valley Association of Governments
 73-710 Fred Waring Drive, Suite 200
 Palm Desert, CA 92260

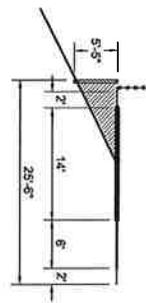
D-11 ADJACENT LEVEL - MIDSLOPE
PARTIAL EXISTING BENCH, UNCONSTRAINED 1.5:1 SLOPE



D-12 ADJACENT LEVEL - MIDSLOPE
UNCONSTRAINED 6:1 SLOPE



D-13 ADJACENT LEVEL - MIDSLOPE
SUBMERGED



D-14 ADJACENT LEVEL
PARTIAL EXISTING BENCH

SECTIONS: OFF-STREET 3



Coachella Valley Association of Governments
73-710 Fred Waring Drive, Suite 200
Palm Desert, CA 92260

CV LINK - 10% SCHEMATIC DESIGN
COACHELLA VALLEY, CA

SCALE: AS SHOWN

DATE: MAY 29 2014

DWG. FILE NO: BWC_# 01.dwg

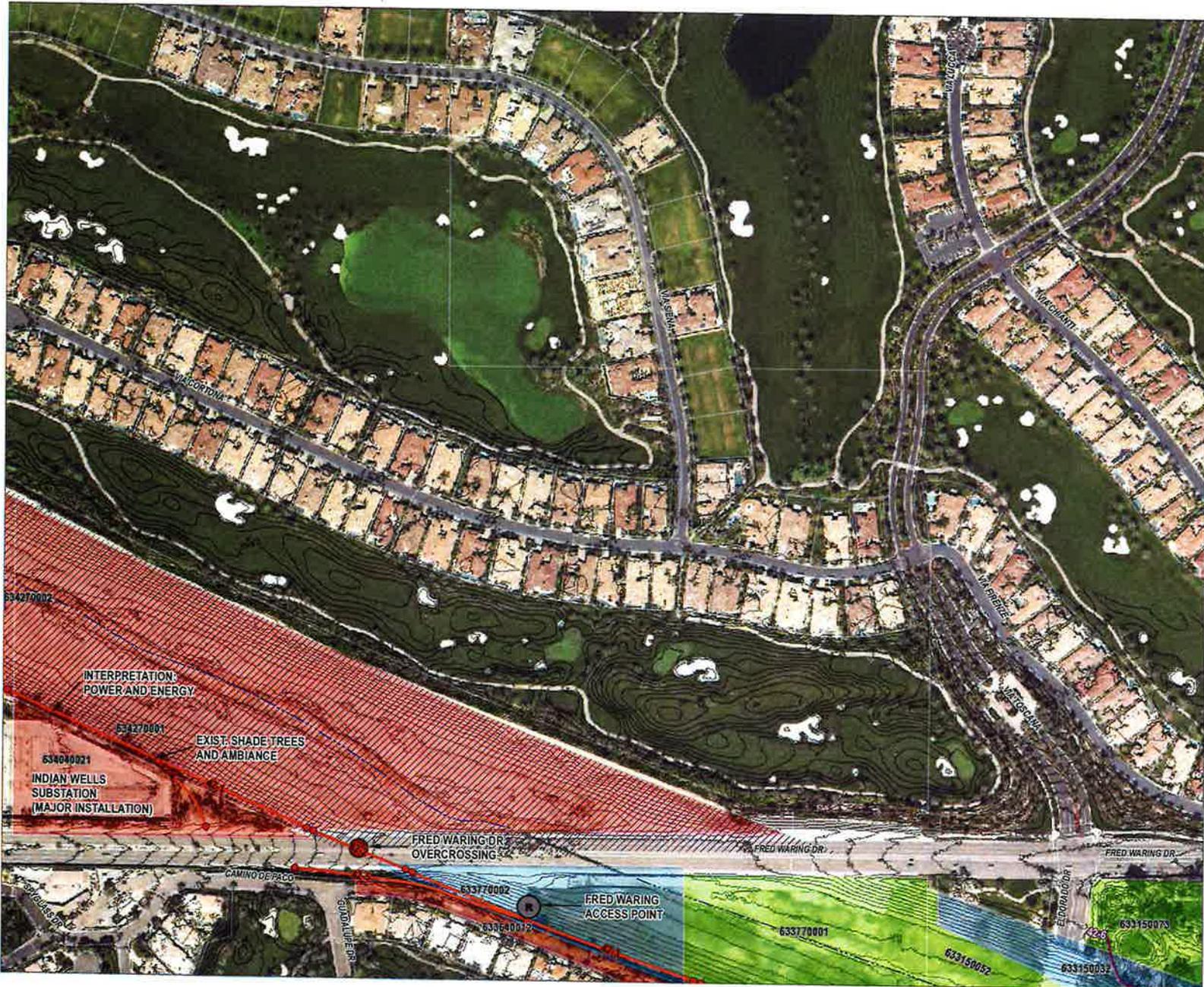
SHEET
1/1

Page-Link	Section	Description	Total Cost	Alt Group	Alt Name	Jurisdiction	Length ft	Length mi	Alt Category	Segment
41-1	D-2	\$148,500 WW r.bank		Core		Palm Desert	400	0.08	Core	5
41-2	X-2	\$1,655,700 Cook St OC		Core		Palm Desert	213	0.04	Core	5
41-6	B-1	\$79,900 Cook St divert to signals		Connect	Cook St	Palm Desert	306	0.06	Connect	5
41-8	A-10	\$243,900 Cook St divert to signals		Connect	Cook St	Palm Desert	285	0.05	Connect	5
41-9	A-10	\$149,200 Cook St connection		Connect	Cook St	Palm Desert	175	0.03	Connect	5
41-3	D-14	\$215,000 WW r.bank		Core		Palm Desert	467	0.09	Core	5
41-4	D-4	\$1,172,200 WW r.bank		Core		Palm Desert	921	0.17	Core	5
41-5	D-4	\$1,873,300 WW r.bank		Core		Palm Desert	1504	0.28	Core	5
41-5	D-4	\$142,000 WW r.bank		Core		Indian Wells	114	0.02	Core	5
41	AP-N	\$58,400 Kelsey Circle		Initial AP	Kelsey Circle Access	Palm Desert			Initial AP	5
42-1	D-3	\$227,800 WW r.bank		Core		Palm Desert	926	0.18	Core	5
42-2	X-2	\$2,940,100 Fred Waring Dr OC		Core		Indian Wells	293	0.06	Core	5
42-4	B-4	\$47,900 Fred Waring connection		Connect	Fred Waring West	Palm Desert	247	0.05	Connect	5
42	AP-R RR	\$382,800 Fred Waring		Future AP	Fred Waring Access	Palm Desert			Future AP	5
42-5	A-10	\$576,300 Fred Waring connection		Connect	Fred Waring West	Indian Wells	674	0.13	Connect	6
42-3	D-12	\$320,600 IW right bank west of El Dorado		Core		Indian Wells	846	0.16	Core	6
42-6	B-4	\$40,300 Connection to El Dorado		Connect		Indian Wells	228	0.04	Connect	6
43-1	D-12	\$318,400 IW right bank		Core	El Dorado	Indian Wells	840	0.16	Core	6
43-2	X-3	\$671,200 El Dorado Dr UC right bank		Core		Indian Wells	127	0.02	Core	6
43-3	B-4	\$103,300 Channel bottom crossing		P Indian Wells		Indian Wells	585	0.11	Alt 1	6
43-4	D-1	\$369,400 Left bank IW		P Indian Wells	1. Left bank	Indian Wells	1542	0.29	Alt 1	6
44-1	D-5	\$318,100 IW mid slope left bank screened		P Indian Wells	1. Left bank	Indian Wells	993	0.19	Alt 1	6
44-2	D-5	\$518,800 IW mid slope left bank screened		P Indian Wells	1. Left bank	Indian Wells	1510	0.29	Alt 1	6
44-3	D-6	\$382,200 IW mid slope left bank screened		P Indian Wells	1. Left bank	Indian Wells	921	0.17	Alt 1	6
44-4a	D-6	\$565,100 IW left bank to miles		P Indian Wells	1. Left bank	Indian Wells	1361	0.26	Alt 1	6
45-5a	X-3	\$734,200 Miles Ave UC left bank		P Indian Wells	1. Left bank	Indian Wells	116	0.02	Alt 1	6
43-3	B-4	\$103,300 Channel bottom crossing		P Indian Wells	2. Left to right bank	Indian Wells	585	0.11	Alt 2	6
43-4	D-4	\$1,776,100 Left bank IW		P Indian Wells	2. Left to right bank	Indian Wells	1542	0.29	Alt 2	6
44-1	D-5	\$318,100 IW mid slope left bank screened		P Indian Wells	2. Left to right bank	Indian Wells	993	0.19	Alt 2	6
44-4	B-4	\$35,400 Connection from left bank to internal bridge		P Indian Wells	2. Left to right bank	Indian Wells	200	0.04	Alt 2	6
44-5	Existing Class	\$0 Cross channel on internal bridge		P Indian Wells	2. Left to right bank	Indian Wells	301	0.06	Alt 2	6
44-6	A-9	\$29,100 Right bank from bridge to club		P Indian Wells	2. Left to right bank	Indian Wells	535	0.10	Alt 2	6
44-7	D-4	\$1,590,400 IW right bank		P Indian Wells	2. Left to right bank	Indian Wells	1353	0.26	Alt 2	6
44-8	B-1	\$219,800 IW right bank		P Indian Wells	2. Left to right bank	Indian Wells	917	0.17	Alt 2	6
45-1	D-5	\$420,500 IW right bank to Miles		P Indian Wells	2. Left to right bank	Indian Wells	1214	0.23	Alt 2	6
45-2	X-3	\$367,100 Miles Ave UC right bank		P Indian Wells	2. Left to right bank	Indian Wells	98	0.02	Alt 2	6
43-5	A-6	\$296,400 El Dorado frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	1320	0.25	Alt 3	6
43-6	A-1	\$224,000 El Dorado frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	865	0.16	Alt 3	6
43	AP-R	\$254,300 111 / Indian Wells City Hall		Future AP	Indian Wells City Hall Access (Alt)	Indian Wells			Future AP	6
43-7	A-1	\$73,500 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	284	0.05	Alt 3	6
43-8	A-1	\$261,100 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	1009	0.19	Alt 3	6
43-9	A-1	\$182,600 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	705	0.13	Alt 3	6
44-9	A-1	\$148,800 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	575	0.11	Alt 3	6
44-10	X-1	\$4,400 IW driveway crossing		P Indian Wells	3. El Dorado and 111	Indian Wells	74	0.01	Alt 3	6
44-11	A-1	\$683,200 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	2639	0.50	Alt 3	6
45-8	A-1	\$274,300 111 frontage		P Indian Wells	3. El Dorado and 111	Indian Wells	1059	0.20	Alt 3	6

Data Tables

CV Link Master Plan 10% Plan Set

Page-Link	Section	Total Cost	Description	Alt Group	Alt Name	Justification	Length #	Length m	AR Category	Segment
45-9	A-1	\$104,700	Miles frontage	P Indian Wells	3. El Dorado and 111	Indian Wells	404	0.08	Alt 3	6
45-2	X-3	\$367,100	Miles Ave UC right bank	P Indian Wells	3. El Dorado and 111	Indian Wells	98	0.02	Alt 3	6
44-12	Existing Class	\$0	Esmeralda cross channel connection	Connect	Switch banks at Esmeralda	Indian Wells	469	0.09	Connect	6
45-6	B-4	\$104,500	W left bank connection to miles	Connect	Miles L bank	Indian Wells	592	0.11	Connect	6
45-7	Existing Class	\$0	Confirm use of existing west side path on Miles	Connect	Switch banks at Miles Bridge	Indian Wells	625	0.12	Connect	6
45-3a	B-4	\$55,900	Right bank	Connect	Miles R bank	Indian Wells	316	0.06	Connect	6
45-6a	D-2	\$237,200	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	639	0.12	Alt 1	6
45-6a	D-14	\$596,800	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	1296	0.25	Alt 1	6
46-1	D-2	\$81,600	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	220	0.04	Alt 1	6
46-2	D-2	\$223,700	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	561	0.11	Alt 1	6
46-3	D-2	\$738,400	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	1988	0.38	Alt 1	6
46-4	D-2	\$296,400	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	744	0.14	Alt 1	6
47	AP-N	\$58,400	Wakefield Circle	Future AP	Wakefield Circle Access	La Quinta			Future AP	6
47-1	D-2	\$533,000	Left bank	Q Miles to Washington	1. Left bank	Indian Wells	1367	0.26	Alt 1	6
47-2	X-3	\$265,200	Washington St UC left bank	Q Miles to Washington	1. Left bank	Indian Wells	105	0.02	Alt 1	6
47-2	X-3	\$131,000	Washington St UC left bank	Q Miles to Washington	1. Left bank	Indian Wells	52	0.01	Alt 1	6
45-3	D-1	\$140,100	Right bank	Q Miles to Washington	2. Right bank	La Quinta	585	0.11	Alt 2	6
45-4	D-1	\$234,400	Right bank	Q Miles to Washington	2. Right bank	Indian Wells	909	0.17	Alt 2	6
45-5	D-1	\$168,200	Right bank	Q Miles to Washington	2. Right bank	Indian Wells	652	0.12	Alt 2	6
46-5	D-1	\$45,400	Right bank	Q Miles to Washington	2. Right bank	Indian Wells	173	0.03	Alt 2	6
46-6	D-1	\$212,800	Right bank	Q Miles to Washington	2. Right bank	Indian Wells	888	0.17	Alt 2	6
46-7	D-14	\$1,293,400	Right bank	Q Miles to Washington	2. Right bank	Indian Wells	2454	0.46	Alt 2	6
47-1a	X-2	\$1,612,000	Deep Canyon Channel bridge	Q Miles to Washington	2. Right bank	Indian Wells	200	0.04	Alt 2	6
47-2a	D-1	\$57,600	Bench at top of slope	Q Miles to Washington	2. Right bank	Indian Wells	241	0.05	Alt 2	6
47-3a	X-2	\$2,302,900	Point Happy	Q Miles to Washington	2. Right bank	Indian Wells	212	0.04	Alt 2	6
47-4a	D-1	\$209,500	Between Point Happy and Washington	Q Miles to Washington	2. Right bank	Indian Wells	796	0.15	Alt 2	6
47-5a	X-3	\$255,700	Washington St UC right bank	Q Miles to Washington	2. Right bank	Indian Wells	73	0.01	Alt 2	6
47-5a	X-3	\$140,500	Washington St UC right bank	Q Miles to Washington	2. Right bank	La Quinta	40	0.01	Alt 2	6
46-8	X-2	\$2,487,100	Tennis Garden cross channel	Phase 3	Cross WW to Tennis Garden	Indian Wells	502	0.10	Phase 3	6
45	AP-R RR	\$382,800	Miles Ave (west)	Initial AP	Miles Ave West Access	Indian Wells			Initial AP	6
46	AP-L RR	\$382,800	Indian Wells Tennis Garden	Future AP	Tennis Garden Access	Indian Wells			Future AP	6
47	AP-C	\$60,000	La Quinta Retail Center	Initial AP	La Quinta Retail Access	La Quinta			Initial AP	7
48	AP-R	\$254,300	Adams St	Future AP	Adams St Access	La Quinta			Future AP	7
48	AP-C	\$60,000	Corporate Center Dr	Initial AP	Corporate Center Dr Access	La Quinta			Initial AP	7
47-5	B-4	\$72,000	Washington Street crossing	R Washington crossing	1. At-grade path on channel bottom	La Quinta	408	0.08	Alt 1	7
47-5	A-2	\$105,600	Washington Street crossing	R Washington crossing	2. Realocate space on existing bridge	La Quinta	408	0.08	Alt 2	7
47-5	X-2	\$2,937,300	Washington St cross channel	R Washington crossing	3. Widen existing bridge	La Quinta	408	0.08	Alt 3	7
47-6a	B-4	\$74,500	Washington St right bank connection	Connect	Washington R bank	La Quinta	422	0.08	Connect	7
47-7a	D-1	\$543,400	Right bank La Quinta	Core	Washington R bank	La Quinta	2269	0.43	Core	7
48-6	D-14	\$407,500	Right bank	Core	Washington R bank	La Quinta	885	0.17	Core	7
48-6a	B-4	\$57,000	Adams St west side right bank connection	Connect	Adams R bank	La Quinta	323	0.06	Core	7
48-7	X-3	\$0	Adams St UC right bank - completed	Core	Adams R bank	La Quinta	88	0.02	Core	7
48-8a	B-4	\$329,200	Adams St east side right bank connection	Connect	Adams R bank	La Quinta	1374	0.26	Core	7
48-8	D-1	\$329,200	Right bank	Core	Adams R bank	La Quinta	1374	0.26	Core	7
48-9	D-2	\$254,500	Right bank	Core	Adams R bank	La Quinta	685	0.13	Core	7
48-10	D-2	\$178,500	Right bank	Core	Adams R bank	La Quinta	481	0.09	Core	7



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- Alignment Determined
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Roadway and Storm Water Channel Crossings

- At-Grade Crossing
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- Overcrossing/Bridge

Access Points

- Regional Access Point
- Local Access Point
- Commercial Access Point
- Neighborhood Access Point

Ownership of Potentially Affected Parcels

- Private
- Public
- Tribal
- Water/Flood Control Districts

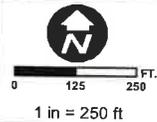
Water/Flood Control Easements

- CVWD Easements

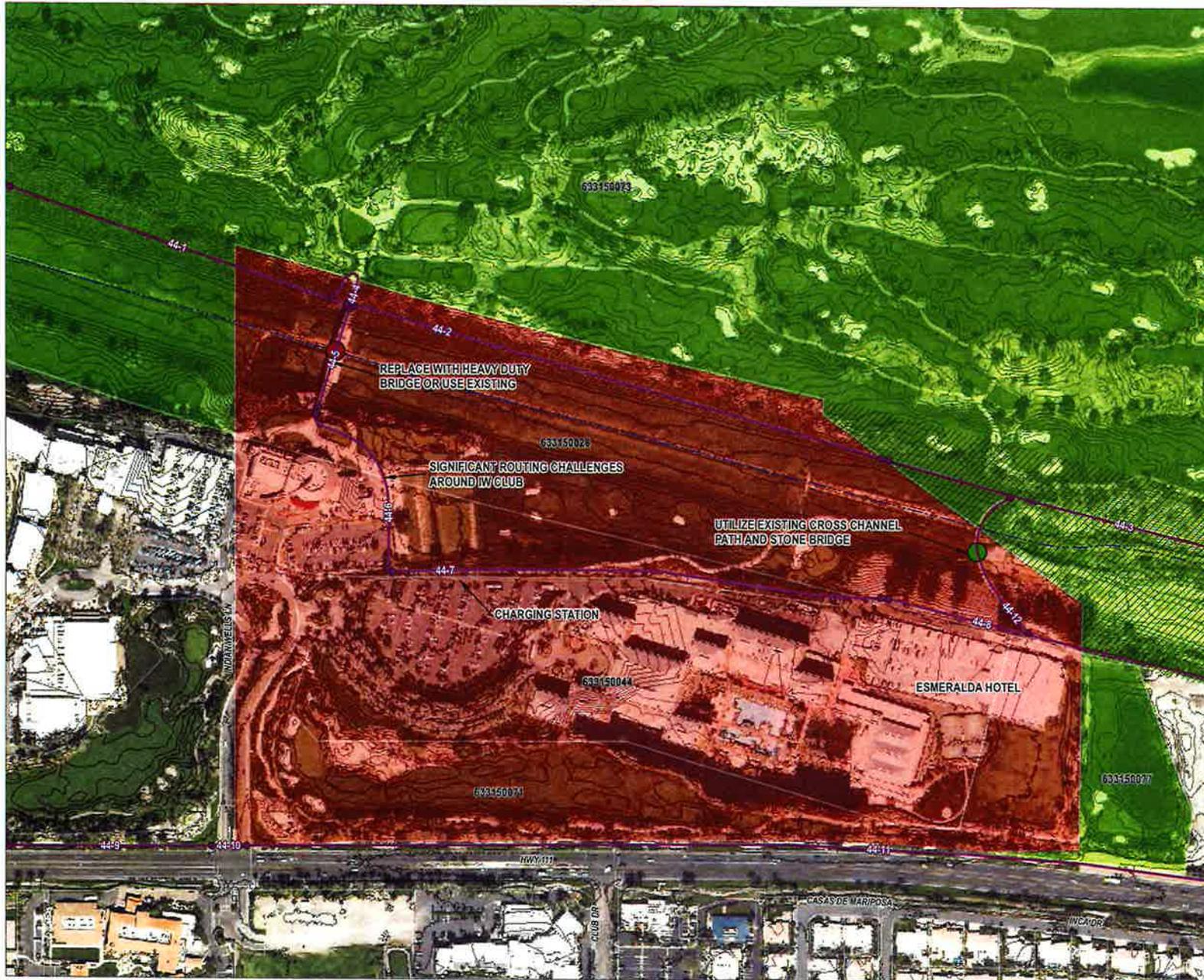
Hydrologic Features

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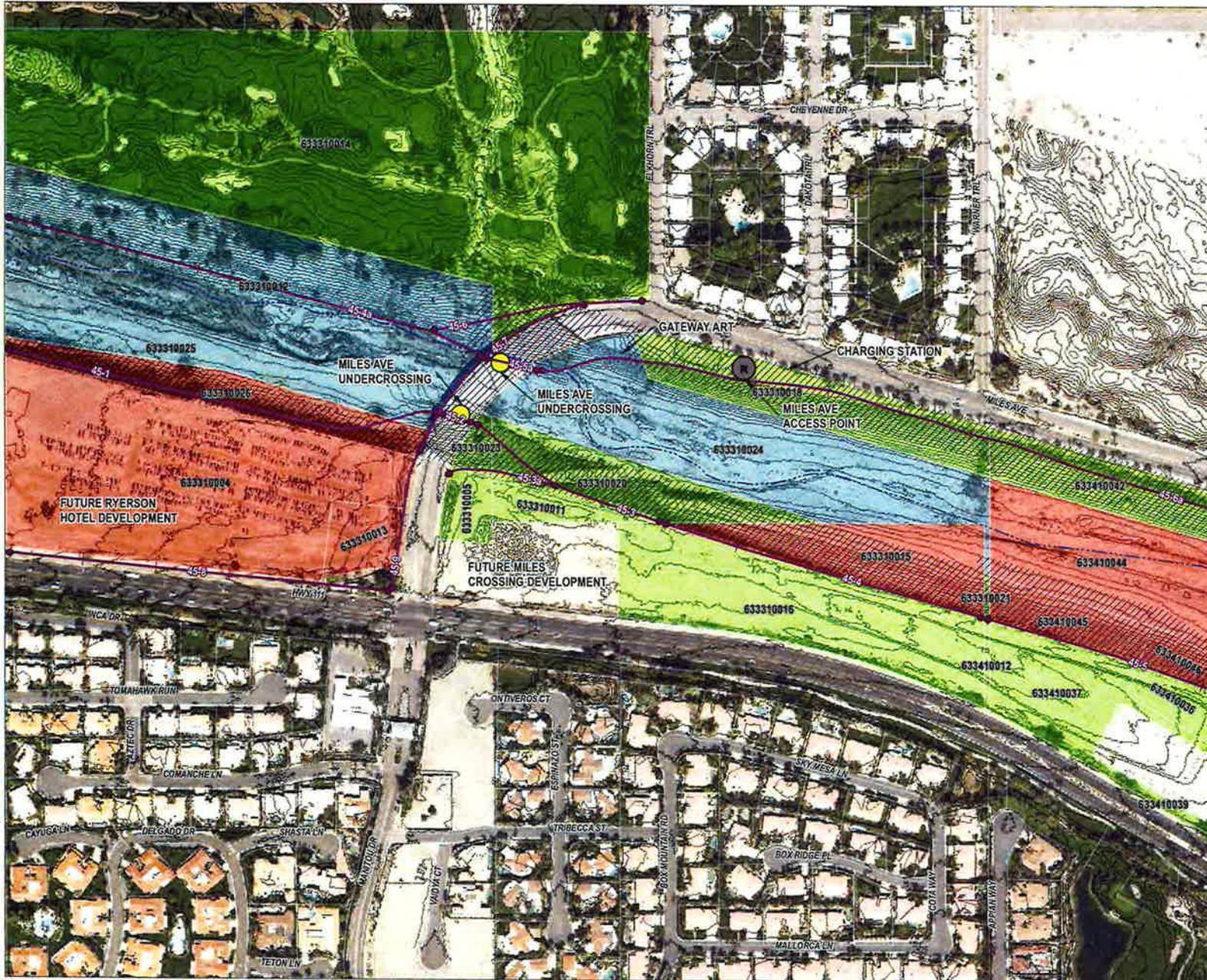
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1 in = 250 ft



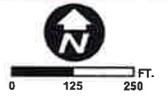
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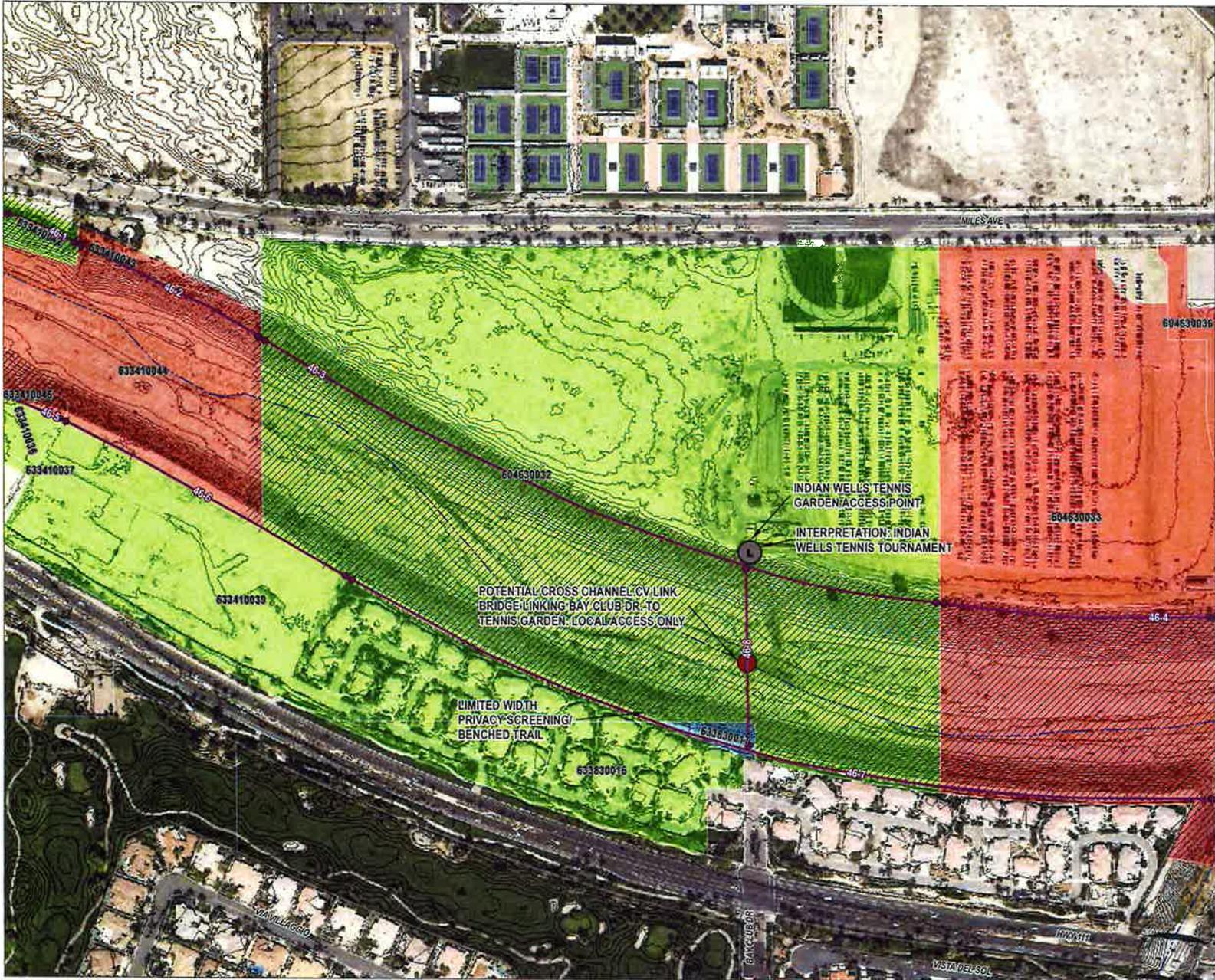
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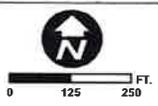


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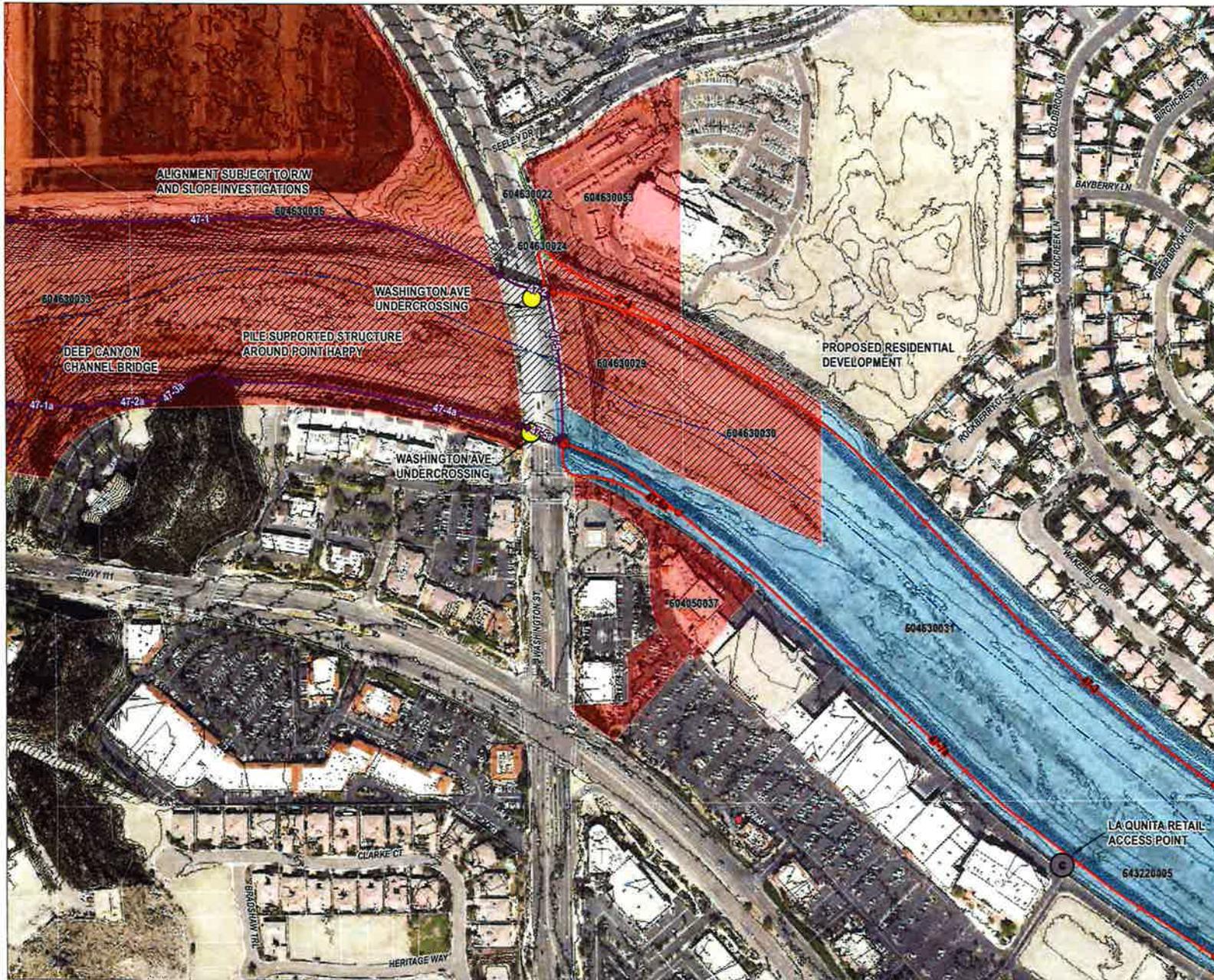
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