

PROJECT STUDY REPORT

REDWOOD WAY REHABILITATION AND PEDESTRIAN IMPROVEMENTS

1. Transportation Problem

This project will address failing roadway surfaces, an unsafe lack of sidewalks, and lack of bike lanes along Redwood Way.

2. Project Location

Redwood Way from Fortuna Boulevard to Rohnerville Road.

3. Project Scope

- Digouts and AC overlay on Redwood Way between Barry Ave and Rohnerville Road (~0.66 miles)
- New bike lanes on both sides of the roadway for the entire length of Redwood Way (ATP)
- Addition of sidewalk on one side of roadway between the Strongs Creek bridge and Rohnerville Road (ATP)
- Road widening (5 – 10 ft. as needed) between the Strongs Creek bridge and Rohnerville Road to provide for the bike lanes and the new sidewalk(ATP)
- New Striping and Pavement Markings
- Drainage improvements to accommodate the new sidewalk
- ADA upgrade of curb ramps as needed throughout project limits
- Addition of a street light (Pedestrian Type 1) at the St. Joseph Dr. intersection

4. Functional Classification

Redwood Way is classified as a *Major Collector* and is not on the National Highway System.

5. Environmental Status

This project includes the rehabilitation and widening of Redwood Way within the existing right of way. It is anticipated that a negative declaration will be the environmental document to satisfy CEQA for this project. It is anticipated that a Finding of No Significant Impact will satisfy the NEPA and special studies may include:

- Biological Clearance Report
- Cultural Resource Study and Consultation with Tribal Governments
- Hazardous Materials Assessment

6. Traffic Data

Current ADT: ~ 4300

7. Roadway Geometrics

This project will change the existing road geometrics by narrowing lane widths as needed and adding bike lanes (expanding the shoulder widths as needed).

Facility	Through Traffic Lanes		Paved Shoulder Width	
	Num. of Lanes	Lane Width	Left	Right
Existing	2	12 - 20	2 – 10	2 – 12
Proposed	2	12	5 – 10	5 – 12
Min. 3R or Local Standards	2	10	2	2

8. Structures

A bridge over Strongs Creek is within the proposed project limits, but no bridge rehabilitation is included. The surface will be striped as needed to incorporate bike lanes.

9. Existing Conditions

The existing pavement is deteriorated with wheel tracks requiring digout of unsuitable material for 87% of the length of Redwood Way.

Sidewalk is needed along one side of Redwood Way from the Strongs Creek bridge to the Rohnerville Road intersection (about 41% of the entire length of Redwood Way). That portion of the road currently has no sidewalk on either side.

No bike lanes currently exist along Redwood Way in either direction.

If this project is not constructed, the pavement will continue to deteriorate, and pedestrians and bicyclists will continue to not have a safe route along Redwood Way to Rohnerville Road.

10. Pavement Rehabilitation

The pavement rehabilitation will provide a service life of at least 10 years. The roadway surface will be constructed to current City of Fortuna and Caltrans standards, and the work will be verified using standard Caltrans material testing procedures.

11. Cost Estimate and Scheduling

<i>Project Component</i>	<i>Cost</i>	<i>Start Date</i>	<i>Estimated Completion</i>
Environmental Studies and Permits	\$40,000	8/30/19	2/27/20
Plans, Specifications, and Estimate	\$150,000	5/31/20	4/26/21
Construction	\$1,835,000	8/29/21	2/22/23
Total	\$2,025,000		

12. Other Agencies Involved

None

13. Other Considerations

This project is consistent with the City of Fortuna’s General Plan and will also serve as an on-road alternative to the planned Strongs Creek Trail.

No additional Right Of Way will be needed to accommodate the widening of the road.

14. Proposed Funding

This project is proposed to be funded from a combination of funding sources. The table below shows the funding source and anticipated funding amount. The pedestrian improvements would not be completed if an Alternative Transportation Plan Grant is not awarded for the project and the project would instead include only the pavement rehabilitation portions of the project as well as any ADA improvements required to comply with ADA case law.

Project Component	Cost Estimate	STIP Funding Request	Committed Funds City Funds (SB-1)	Uncommitted Funds ATP	Allocation Schedule
Environmental Studies & Permits	\$40000	\$0	\$40,000		2017/2018
Plans, Specifications & Estimates	\$150000	\$0	\$150,000		2019/2020
Right of Way	\$35000	\$0	\$35,000		2019/2020
Construction Engineering	\$150,000	\$0	\$125,000	\$25,000	
Construction	\$1,650,000	\$1,150,000	\$0	\$25,000	2020/2021
Total	\$2,025,000	\$1,150,000	\$350,000	\$525,000	

15. List of Attachments

- A. Project Map/Vicinity Map
- B. City of Fortuna Standard Street Section Details
- C. Engineer's Estimate

16. Report Preparation

Prepared By Anthony Carnemolla Date 11/21/17

This Project Study Report (Local Rehabilitation) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

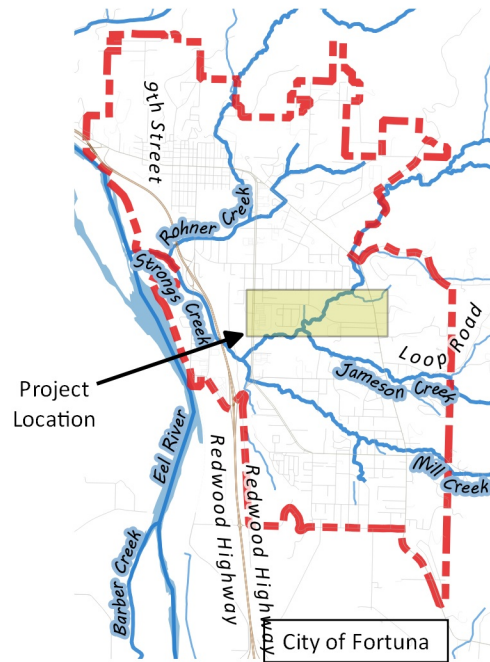


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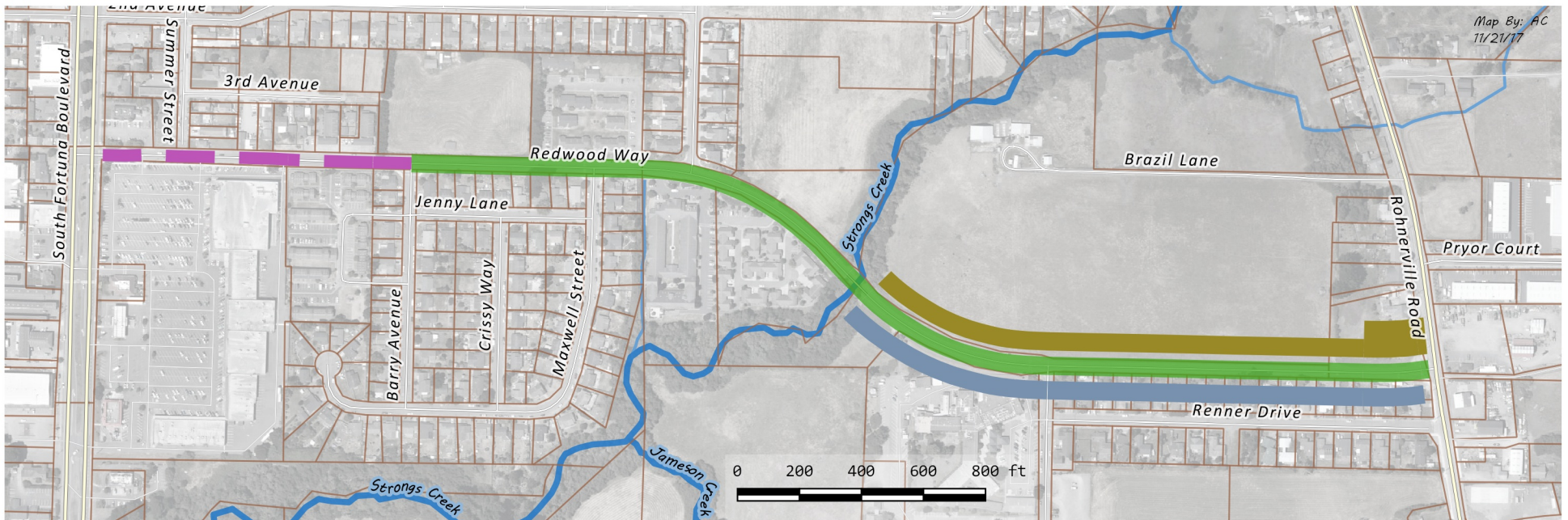
REGISTERED CIVIL ENGINEER

12/11/17

DATE



-  New Bike Lanes
-  Road Surface Rehab + New Bike Lanes
-  New Sidewalk
-  Road Widening, 5'
-  Road Widening, 10'

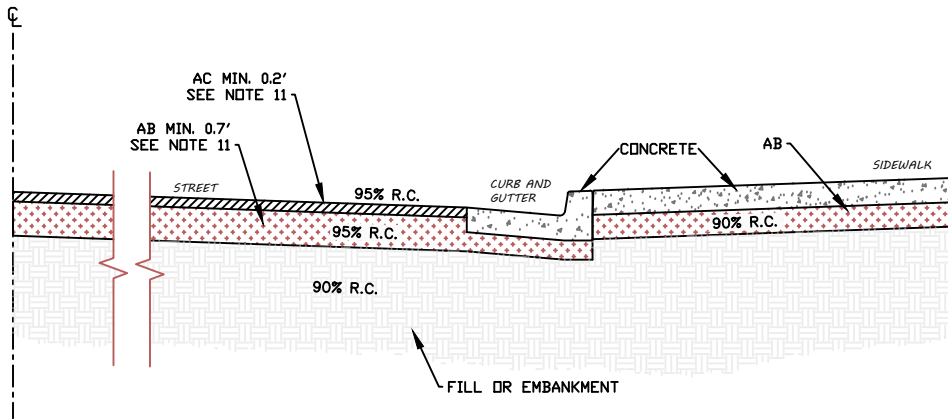
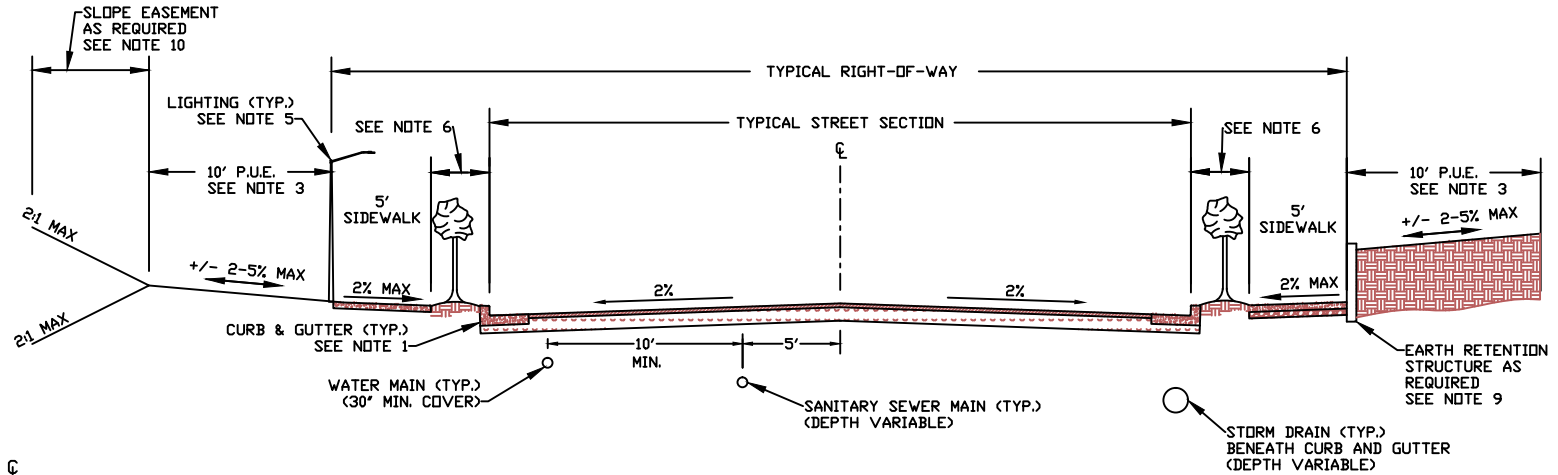


2018 RTIP Project Vicinity and Extents
 CITY OF FORTUNA - Redood Way Rehabilitation + Bike and Pedestrian Improvements

Data Sources:
 City of Fortuna GIS
 2016 Aerial Orthophoto
 Open Street Maps

City of Fortuna assumes no liability for errors, omissions, or inaccuracies of information provided. Mapping and data provided are for planning purposes only

TYPICAL STREET SECTION AND UTILITY LOCATIONS



TYPICAL HALF SECTION

NOTES:

1. CONCRETE CURBS AND GUTTERS SHALL BE CONSTRUCTED ON BOTH SIDES OF ALL PUBLIC ROADS. EXCEPTIONS TO THIS REQUIREMENT MAY BE PERMITTED WHERE THE CITY ENGINEER FINDS THAT ADEQUATE DRAINAGE AND TRAFFIC CONTROL ARE PROVIDED AND NORMAL MAINTENANCE WOULD NOT BE IMPAIRED.
2. CONCRETE WALKWAYS OF FIVE FEET (5') MINIMUM WIDTH SHALL BE PROVIDED ALONG OR IN PROXIMITY TO ALL PUBLIC STREETS AND ALONG PRIVATE STREETS AS DETERMINED BY THE CITY ENGINEER TO BE NECESSARY.
3. A TEN (10') FOOT WIDE PUBLIC UTILITY EASEMENT (P.U.E.) SHALL BE PROVIDED ON BOTH SIDES OF THE STREET.
4. STREETLIGHTS, STREET SIGNS, PARKING SIGNS, AND POWER POLES SHALL BE INSTALLED WITHIN PUBLIC UTILITY EASEMENTS UNLESS ANOTHER LOCATION IS APPROVED BY THE CITY ENGINEER.
5. STREET LIGHTING:
 - 5.1. LOCATED OUTSIDE THE SIDEWALK.
 - 5.2. AT INTERSECTIONS, PLACED NEAR THE CURB RETURN AT A FAR RIGHT APPROACH.
 - 5.3. AT MID-BLOCK LOCATIONS, PLACED AT LOT LINES WHERE PRACTICAL.
 - 5.4. LOCATION OF ELECTROLIERS SHALL BE APPROVED BY THE CITY ENGINEER, IN CONJUNCTION WITH THE UTILITY COMPANY, PRIOR TO INSTALLATION.

6. OPTIONAL PLANTER STRIP SUBJECT TO APPROVAL BY CITY.
7. TREE TYPES AND LOCATIONS SHALL BE APPROVED BY THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR PRIOR TO PLANTING.
8. ALL FENCING LOCATIONS AND DESIGNS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION WITHIN THE RIGHT-OF-WAY.
9. EARTH RETENTION STRUCTURE(S), INSTALLED IN P.U.E. REQUIRED WHEN EXISTING SLOPE EXCEEDS 5%.
10. SLOPE EASEMENT REQUIRED FOR SLOPES EXCEEDING 2:1, OR AS RECOMMENDED BY SOILS REPORT.
11. RELATIVE COMPACTIONS (R.C.) SHOWN ARE MINIMUMS.
12. AGGREGATE BASE (AB) AND ASPHALT CONCRETE (AC) THICKNESS DETERMINED BY SOIL CONDITIONS AND TRAFFIC LOADS.

Road Rehabilitation, New Bike Lanes, and New sidewalks - Redwood Way (Fortuna Blvd to Rohnerville Rd)

Estimate Completed by Anthony Carnemolla 11/20/2017

No.	Description	Qty	Unit	Unit Cost	Cost	SUB TOTAL
1	Mobilization - maximum of 5% of total bid price	1	LS	5.00%	\$60,789.20	
2	General Conditions, Bonds and Insurance	1	LS	2.00%	\$24,315.68	
3	Erosion Control - includes all BMPs, SWPPP and Reporting	1	LS	1.00%	\$12,157.84	
4	Traffic Control	1	LS	1.00%	\$12,157.84	
	<i>Sub-total</i>				\$109,420.56	\$109,420.56
Roadway Rehabilitation						
	AC Digouts	578	CY	\$900.00	\$520,000.00	
	AC Overlay	1,965	TON	\$130.00	\$255,401.25	
	New Centerline Striping (4'), accounting for dashes and solid parts	2,075	LF	\$4.00	\$8,300.00	
	New Edgeline Striping (4')	7,500	LF	\$4.00	\$30,000.00	
	New stop pavement marking	4	EA	\$250.00	\$1,000.00	
	New turn arrow markings	68	SF	\$10.00	\$680.00	
	New crosswalk markings	2	EA	\$2,000.00	\$4,000.00	
	Redwood & Rohnerville new extra turn lane striping	100	LF	\$4.00	\$400.00	
	<i>Sub-total</i>				\$819,781.25	\$819,781.25
Bike Lane Improvements, additional costs (includes road widening)						
	Edgeline to Bike Lane delta (6' - 4') for rehab length	7,800	LF	\$2.00	\$15,600.00	
	Remove 4" edgeline, (Fortuna Boulevard to Barry Ave)	1,200	LF	\$2.50	\$3,000.00	
	6' Thermoplastic Bike Lane Striping, (Fortuna Boulevard to Barry Ave)	1,200	LF	\$6.00	\$7,200.00	
	Bike lane pavement marking, (10.5 sf) 1/500 feet	189	SF	\$10.00	\$1,890.00	
	Roadside signs, 1/200 feet	45	EA	\$650.00	\$29,250.00	
	Clearing and grubbing	7,800	SF	\$1.00	\$7,800.00	
	Sawcut pavement	1,330	LF	\$5.00	\$6,650.00	
	Excavation and Grading	96	CY	\$20.00	\$1,925.73	
	Aggregate Base (under widened AC + 1 ft. shoulder backing)	282	CY	\$55.00	\$15,497.84	
	New AC Surface	121	TON	\$130.00	\$15,717.00	
	Relocate wire fence	900	LF	\$5.00	\$4,500.00	
	<i>Sub-total</i>				\$109,030.57	\$109,030.57
Sidewalk/pedestrian improvements						
	Sawcut pavement	1850	LF	\$5.00	\$9,250.00	
	Clearing and grubbing (width of sidewalk + curb&gutter + 2' AC)	16650	SF	\$1.00	\$16,650.00	
	Excavation and Grading	160	CY	\$20.00	\$3,197.21	
	Aggregate Base (under sidewalk + curb&gutter + 2' of AC)	206	CY	\$55.00	\$11,304.43	
	Construct curb & gutter	1850	LF	\$50.00	\$92,500.00	
	Construct 4' PCC Sidewalk	9250	SF	\$12.50	\$115,625.00	
	New AC Surface	57	TON	\$130.00	\$7,455.50	
	Remove concrete+AC, existing deficient driveway approach	300	SF	\$1.00	\$300.00	
	Construct 6' PCC driveway approach	300	SF	\$20.00	\$6,000.00	
	Remove concrete, for St. Joseph Dr. curb ramps	315	SF	\$1.00	\$315.00	
	St. Joseph Dr. crossing curb ramps	2	EA	\$3,500.00	\$7,000.00	
	upsized SD main across St. Joseph Dr. along Redwood Way	45	LF	\$75.00	\$3,375.00	
	relocate DI's	2	EA	\$4,000.00	\$8,000.00	
	Pedestrian Light Type 1 (Streetlamp style, placed near intersections)	1	EA	\$6,000.00	\$6,000.00	
	<i>Sub-total</i>				\$286,972.14	\$286,972.14
				SUBTOTAL		\$1,325,204.51
				ESTIMATING CONTINGENCY	10.0%	\$132,520.45
				ROW	0.0%	\$0.00
				PLANS, SPECIFICATIONS AND ENGINEERING	12.0%	\$159,024.54
				ENVIRONMENTAL PERMITTING	4.0%	\$53,008.18
				MITIGATION	0.0%	\$0.00
				CONSTRUCTION ENGINEERING	12.0%	\$159,024.54
				TOTAL		\$1,829,000.00