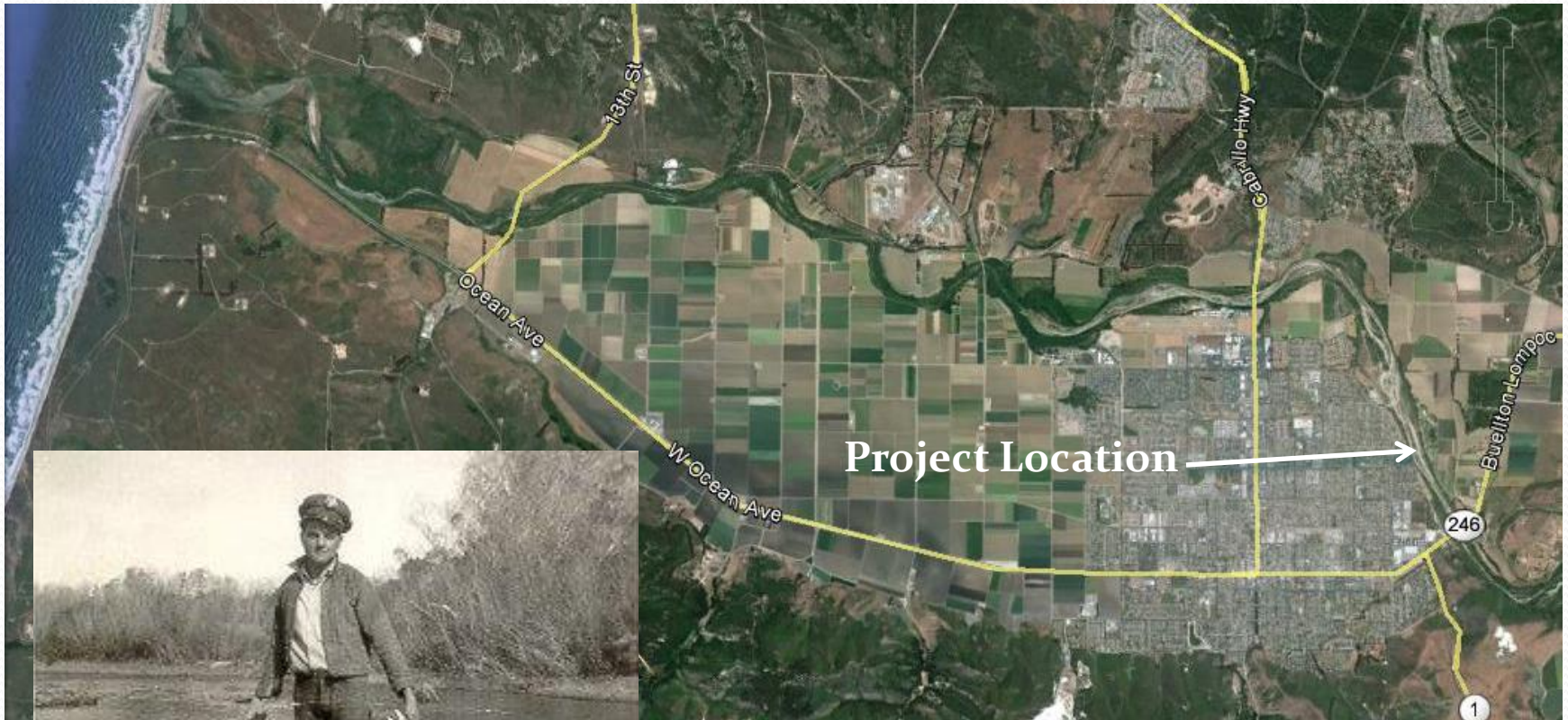


SANTA YNEZ RIVER BANK STABILIZATION PROJECT



Santa Ynez River Bank Stabilization Project

12 miles upstream of the coast
in the City of Lompoc



1947 steelhead trout in Lompoc



The Santa Ynez River Bank Stabilization Project will:

- Protect public recreational uses.
- Restore native habitat.
- Improve water quality.
- Enhance natural aesthetics.
- Improve public safety.

Endangered Recreational Use at Project Location



Loss of Native Habitat due to Bank Erosion at Project Location



Near-vertical
river bank
looking West

Bank Sediment & Vegetative Debris falling into River Flows, March 22, 2011, at Project Location



Re-established River Bank will Enhance Natural Aesthetics

Degraded River Bank
at Project Location



Re-established River Bank
at Previous Buellton Project



Feasible Solution

The City's specialized consulting team evaluated many options, and recommended a Reinforced Vegetative Bank Protection (RVBP) system, because they are:

- Effective in protecting and re-building eroded sandy river banks,
- Projected to last over 50 years with minimal maintenance costs, and,
- Environmentally compatible, promoting establishment of native habitat.

The City's consulting team has implemented 3 similar RVBP projects upstream, on the Santa Ynez River, in the Solvang and Buellton areas, which have performed successfully since installation up to 20 years ago.

How RVBP Systems work:

Similar RVBP Project in Buellton



2002 Pre-Project Condition



Immediately after construction



June 2010
After establishment
of vegetation

Conceptual Level Project Budget Estimates

Design & Environmental

75% Requested from FEMA HMGP	\$150,000
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25% Requested from CREF	\$50,000
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Construction & Related Expenses

75% Requested from FEMA HMGP	\$518,000
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25% Requested from CREF	\$172,000
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Total Project Cost Estimate	\$890,000
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Conceptual Level Project Schedule Estimates

Design & Environmental	up to 24 months
Construction (bidding through closeout)	11 months
Total Project Duration Estimate	35 months

The Santa Ynez River Bank Stabilization Project will:

- Protect public recreational uses.
- Restore native habitat.
- Improve water quality.
- Enhance natural aesthetics.
- Improve public safety.





Questions ?



Supplemental Information

The following slides contain supplemental supporting information.



Bike Path

North Avenue

Lemon Avenue

Oak Avenue

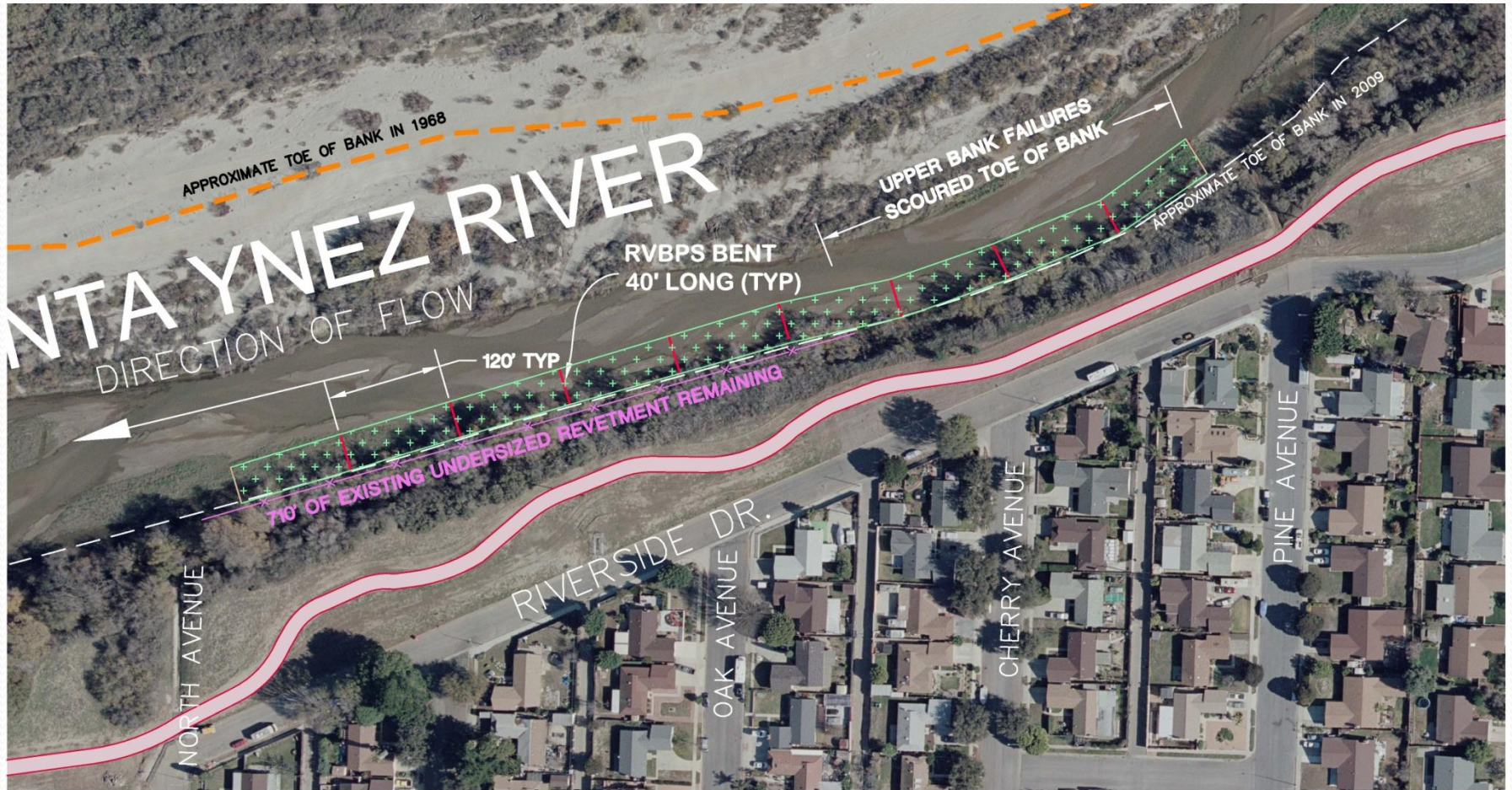
Cherry Avenue

Pine Avenue

Seventh Street

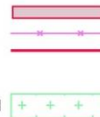
Project Location

Proposed RVBP System Plan



LEGEND

BIKE PATH
 EXISTING REVETMENT
 PROPOSED REVETMENT
 (REINFORCED VEGETATIVE BANK PROTECTION SYSTEM)
 PROPOSED TREES AND RIPARIAN VEGETATION



Solution Evaluation Matrix

Option	Maintenance	Level of Protection	Longevity	Annualized Cost	Failure Mode	Sediment Transport
1 – RVBP only	Rare	10 year storm*	50+ years	\$77,100	Slow and self healing	Better
2 – RVBP with Graded Slope	Rare	10 year storm*	50+ years	\$88,100	Slow and self healing	Better
3 – Pilot Channel	Frequent	3 to 5 year storm	3 to 5 years maximum	\$423,000 to \$593,900	Frequent and rapid	Poor
4 – Rock Slope Protection with Pilot Channel	Frequent to Moderate	10 year storm	15 - 25 years	\$549,700 to \$683,900	Rapid	Poor
5 – No Project	N/A	None	15	\$599,100	on-going	Poor