



Clear Creek Road (PM 1.82 & 0.25) Bridge Replacement Projects

Public Meeting, Wednesday, November 20, 2013

Pleasant Valley Middle School

Presented By:

County of El Dorado
Community Development Agency
Transportation Division

Matthew Smeltzer, P.E.

Deputy Director of Engineering

Thor Larsen, P.E.

Senior Civil Engineer

Chandra Ghimire, P.E.

Associate Civil Engineer



Public Meeting Agenda



- **Welcome and Introduction – Matt Smeltzer**
- **County Bridge Program / Funding – Matt Smeltzer**
- **Clear Creek Rd Bridges - Facts/Conditions – Chandra Ghimire**
- **Project Overview – Thor Larsen**
- **Open Question & Discussion Period**
- **County Staff Available to Answer Questions and Receive Public Input**

County Bridge Inventory



- 79 Total Bridges in County Bridge Inventory
- 25 are in 2013 Capital Improvement Program adopted June 24, 2013 (see Section VIII: West Slope Projects)
<http://www.edcgov.us/Government/DOT/CIP.aspx>
- Included in the CIP - Two crossings over Clear Creek: Clear Creek Rd PM 1.82 (CIP# 77138) and Clear Creek Road PM 0.25 (CIP# 77139)
- Both projects eligible for 100% reimbursement from the federal funding Highway Bridge Program (HBP)

Highway Bridge Program (HBP)



- Federal funding program for bridge safety projects - maintenance, rehabilitation and replacement
- Program authorized by Federal Highway Administration (FHWA) & administered by State DOT's (CA – Caltrans)
- Requires Planning, Environmental, and Preliminary Engineering (PE) completed within 10 years of PE authorization date
- **April 2012** – County received FHWA authorization to proceed with PE for Clear Creek Road projects
- 100% Federal Participating Share - **No Local Match** (*County General Fund will NOT be used*)

Bridge Inspections / Sufficiency Ratings



- Each bridge is thoroughly inspected by Caltrans every 2 years and rated on 140 elements
- Given a Sufficiency Rating (SR) score of 0 to 100
- Rating is overall measure of the bridge condition and sufficiency to remain in service
- Used to determine eligibility for federal funds and prioritization

Federal Funding Eligibility Criteria



- SR < 80 is eligible for **Rehabilitation**
- SR < 50 is eligible for **Replacement**
- Rehab projects – cannot use any additional federal aid for 10 years.
- Replacement projects - bridge must be either ***functionally obsolete*** or ***structurally deficient***.

Bridge Sufficiency Terminology



Functionally Obsolete:

Built to standards that are not used today, such as inadequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand.

Structurally Deficient:

Limitations of the structural condition of the bridge, such as weight limits or load capacity.

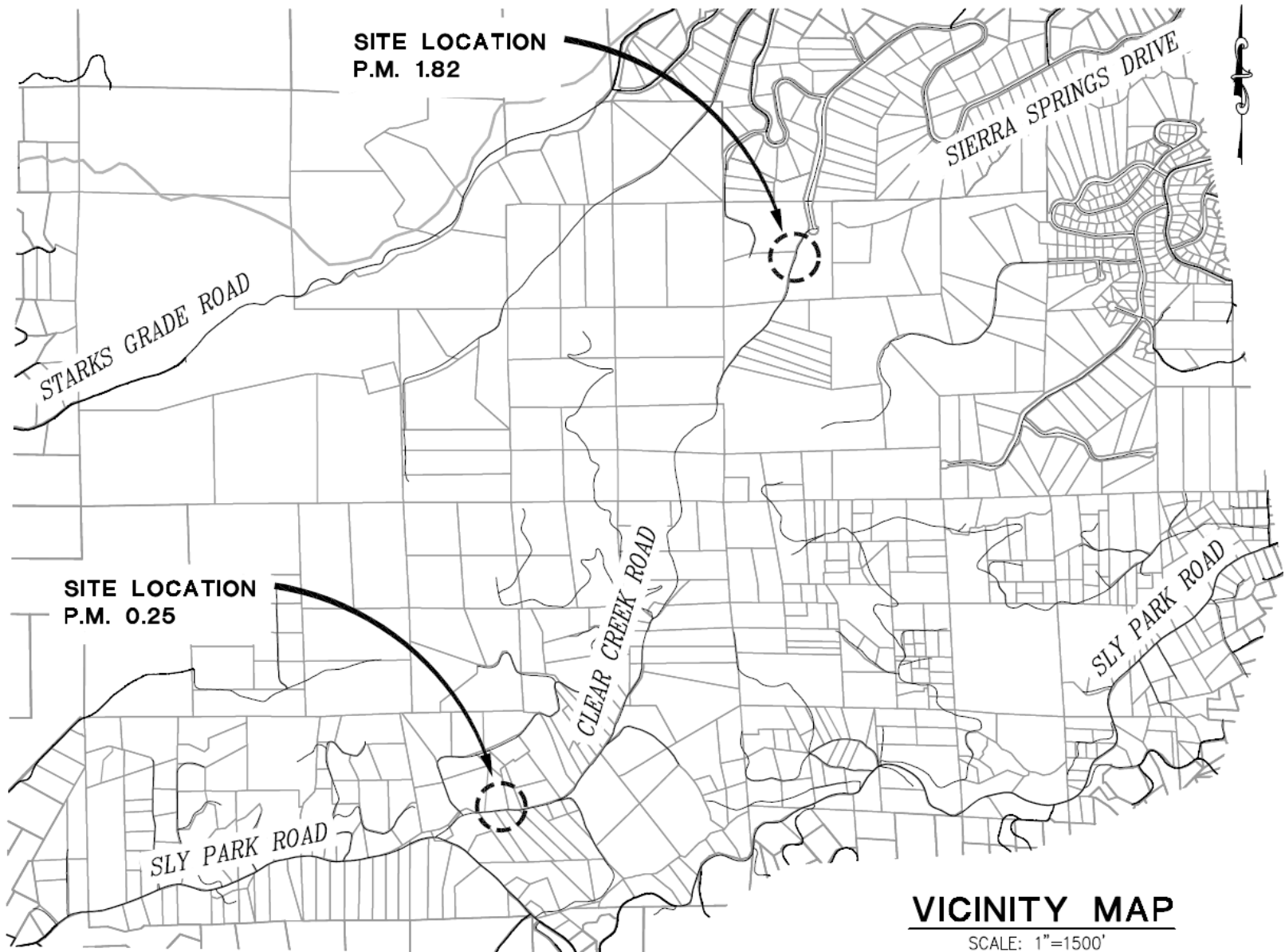
Fracture Critical:

A steel member in tension, or with a tension element, whose failure would probably cause a portion of or the entire bridge to collapse.

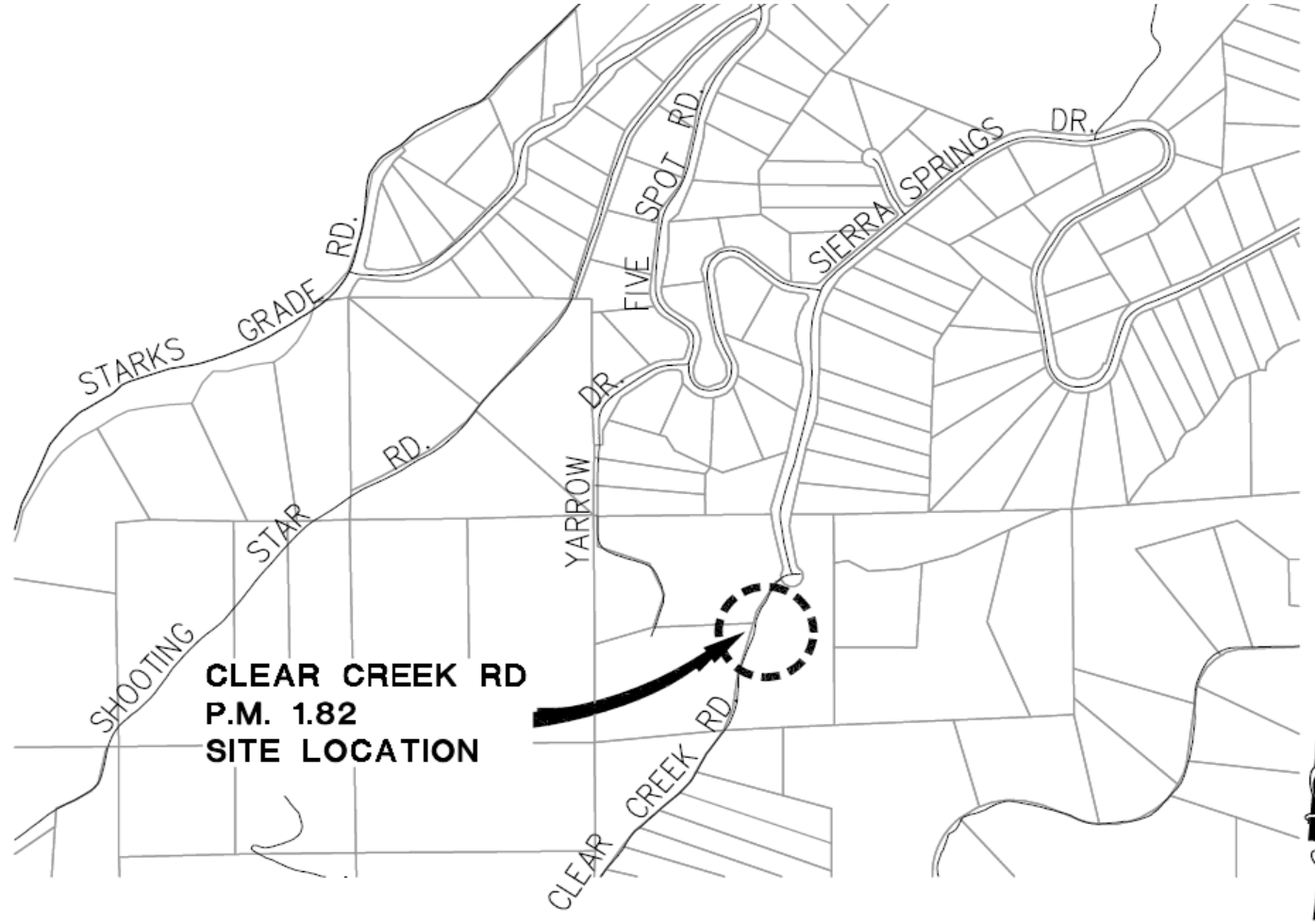
Scour Critical:

The removal of sediment such as sand and rocks around bridge abutments or piers by swiftly moving water.

Clear Creek Road (PM 1.82 & 0.25) Bridge Replacement Projects



Clear Creek Rd PM 1.82 Bridge Location



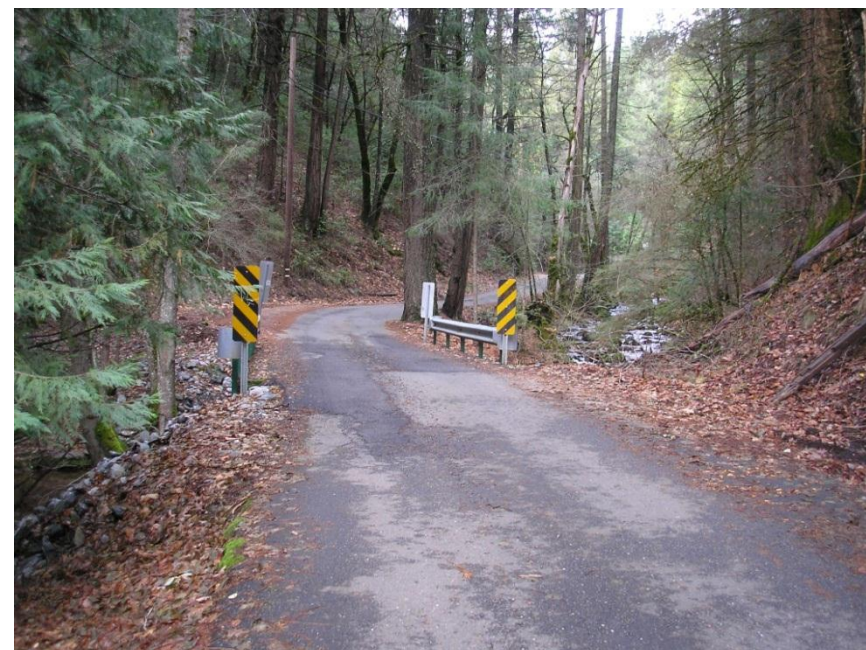
LOCATION MAP

N.T.S.

Clear Creek Rd PM 1.82 Bridge Facts/Condition



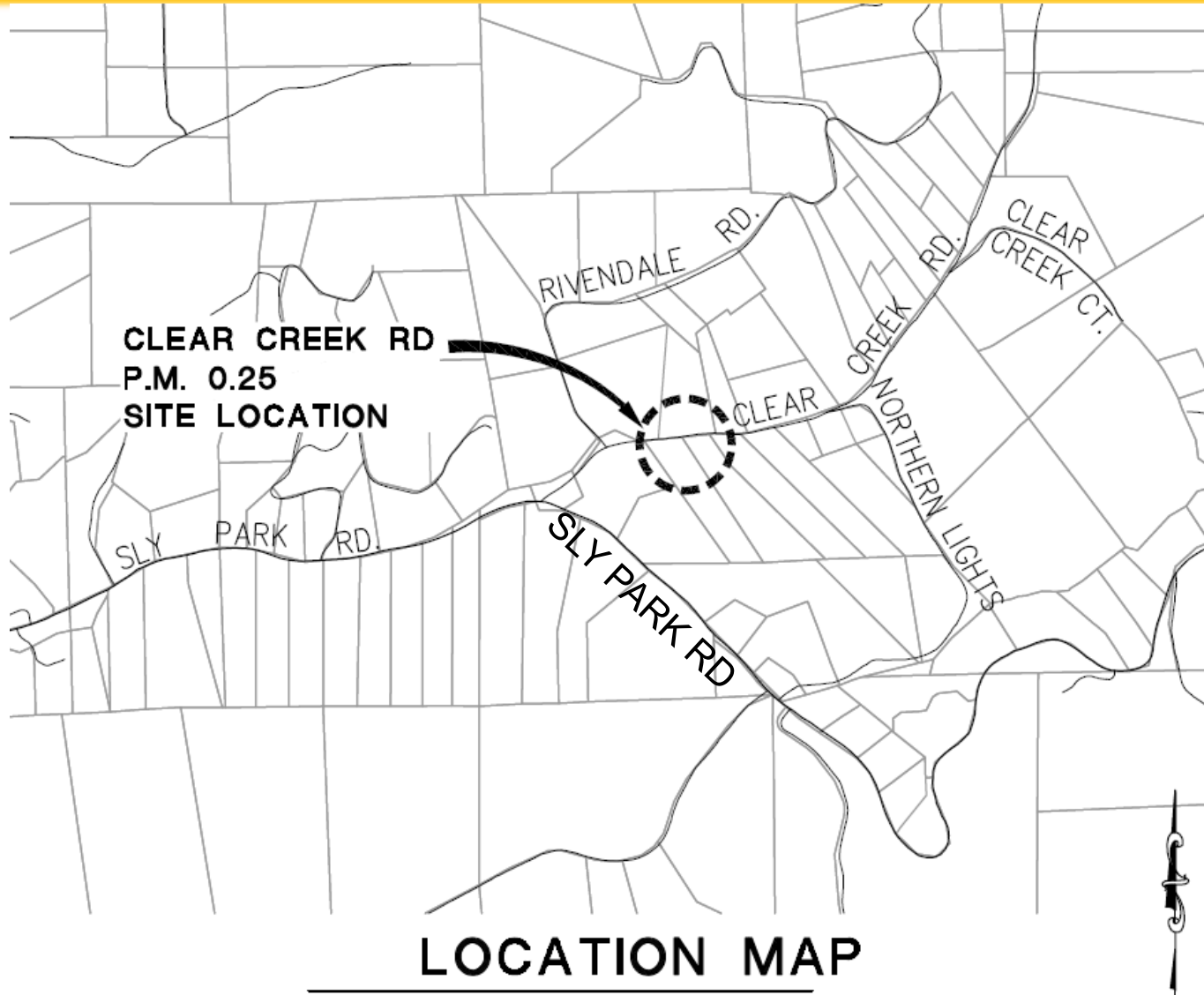
- Year Built: **1940** (73 years old), Expected life: 75 years
- One-lane, 14-ft wide x 27-ft long
- Reinforced concrete slab deck on steel girders
- Avg. Daily Traffic: Approx. 150 (both directions, 2010 traffic count)
- Sufficiency Rating: **33.5** (2011 Inspection)
- Structurally Deficient
- Fracture Critical and Scour Critical
- 2011 inspection states:
scour on foundation, spalls on deck panel, broken welds connecting cross bracing and steel girders, rust and corrosion on steel girder, damaged bottom flange of left girder near mid span.



Clear Creek Rd PM 1.82 Bridge Photos 6/30/13



Clear Creek Rd PM 0.25 Bridge Location



LOCATION MAP

N.T.S.

Clear Creek Rd PM 0.25 Bridge Facts/Condition



- Year Built: **1957** (56 years old), Expected life: 75 years
- One-lane, 10-ft wide x 34-ft long
- Reinforced concrete slab deck on steel stringers (R/R Car Frame)
- Avg. Daily Traffic: Approx. 450 (both directions, 2010 traffic count)
- Sufficiency Rating: **18.6** (2011 Inspection)
- Structurally Deficient
- Fracture Critical and Scour Critical
- 2011 inspection states:
concrete spall at edge of bridge deck
and exposed rebar, diagonal crack on
abutments, heavy rust on steel girders,
minor section loss from pack rust at
abutment, no railing on the structure,
8-inch high concrete curb, extensive scour.



Clear Creek Rd PM 0.25 Bridge Photos 6/30/13



Why Replace the Existing Bridges?

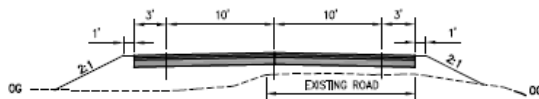
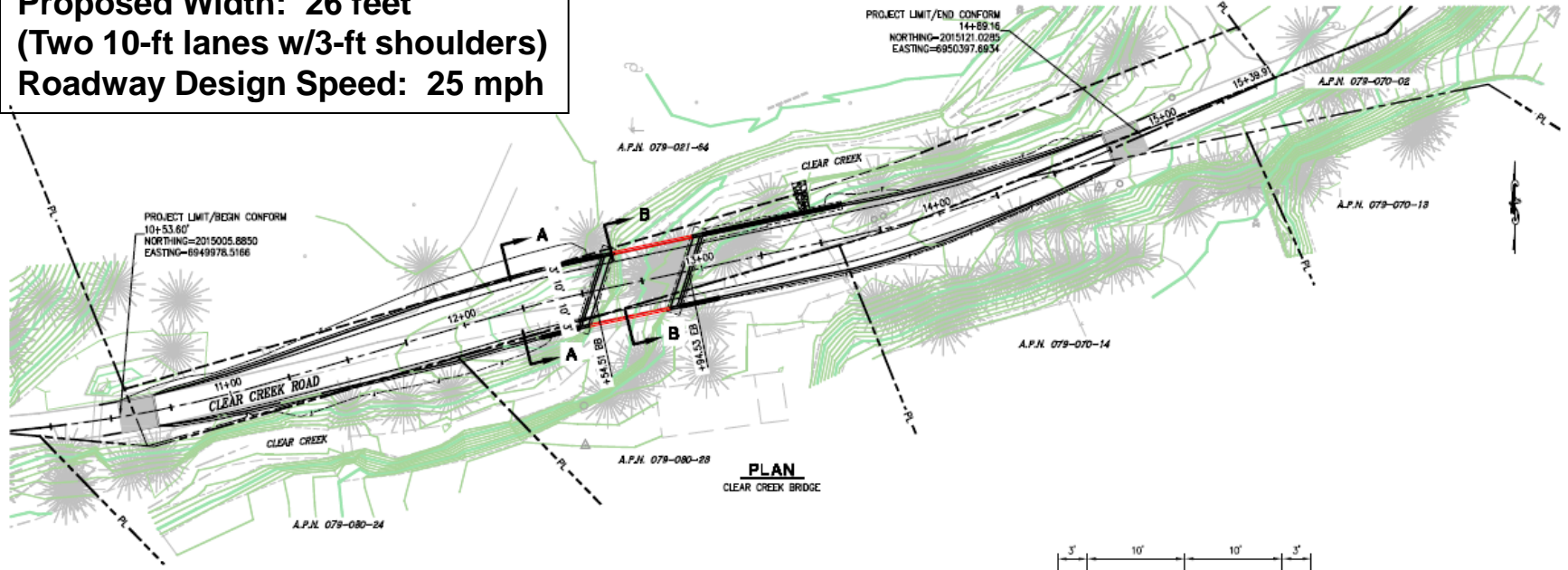


- Both bridges are classified as Structurally Deficient
- Both bridges are Fracture Critical and Scour Critical
- 100% federal funding secured now; this funding may not be available in future, if projects are postponed
- No County funds will be used for this project
- Narrow one-lane restricts emergency access

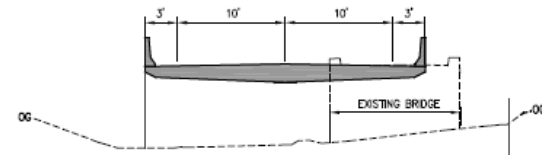
Clear Creek Rd PM 0.25 Bridge Conceptual Design

CLEAR CREEK ROAD P.M. 0.25 BRIDGE CONCEPTUAL DESIGN

**Proposed Width: 26 feet
(Two 10-ft lanes w/3-ft shoulders)
Roadway Design Speed: 25 mph**



SECTION A-A
SCALE: 1"=5H,V



SECTION B-B
SCALE: 1"=5H,V

CLEAR CREEK 0.25 BRIDGE - PUBLIC INFORMATIONAL MEETING

PRELIMINARY

LAYOUT
SCALE: 1" = 20'

NO.	DATE	DESCRIPTION	BY

PREPARED UNDER THE SUPERVISION OF:	DATE:
	10/09/13
REVISIONS (SEE DRAWING):	DATE:

DESIGNED:	DATE:
	10/09/13
CHECKED:	DATE:
ROAD NUMBER:	



**COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION**

**CLEAR CREEK ROAD
P.M. 0.25 BRIDGE REPLACEMENT**

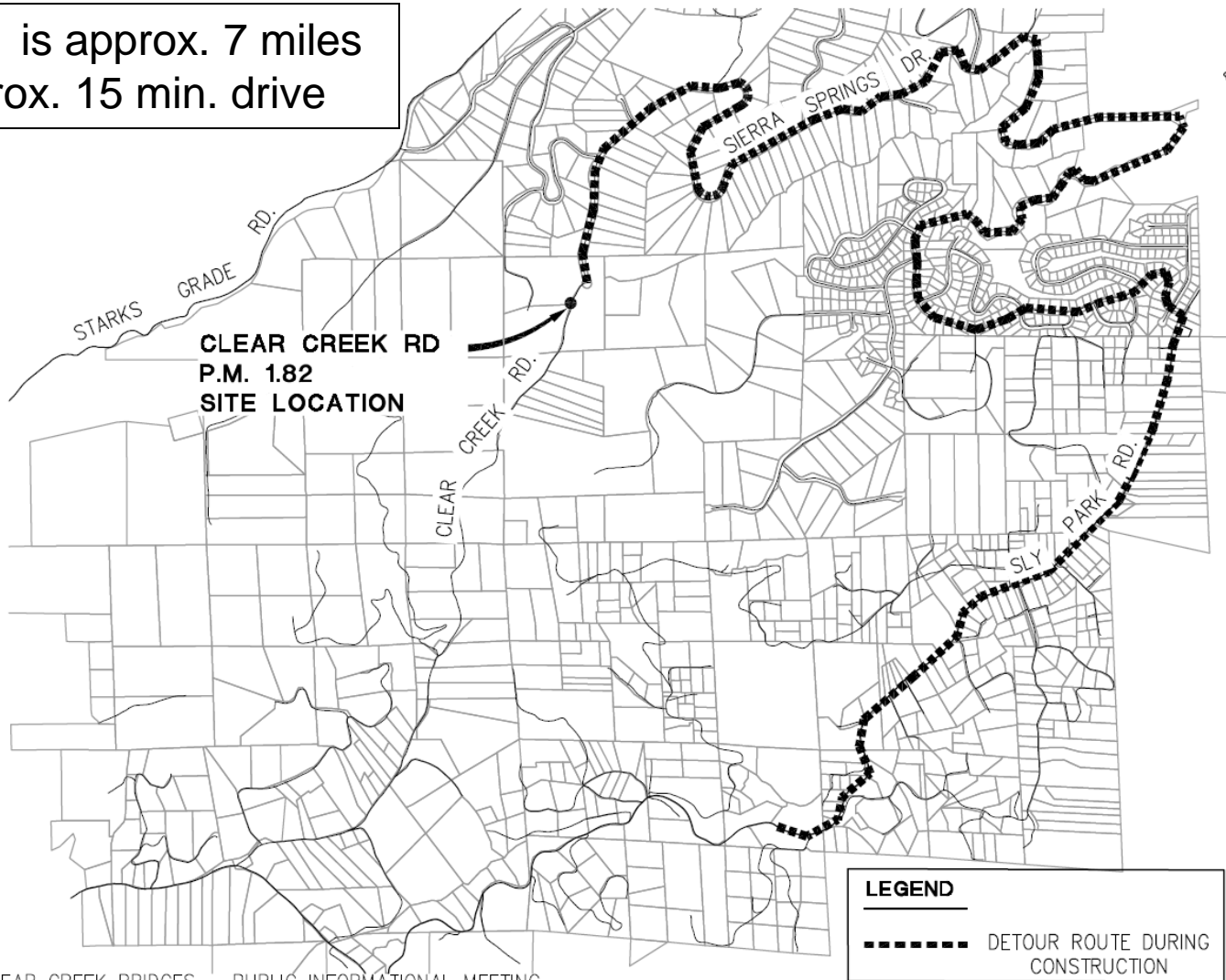
SHEET
EXHIBIT
1 OF 1
77199

Clear Creek Rd PM 1.82 Detour Route during Construction



Bridge may be closed for a few days

Detour is approx. 7 miles
or approx. 15 min. drive

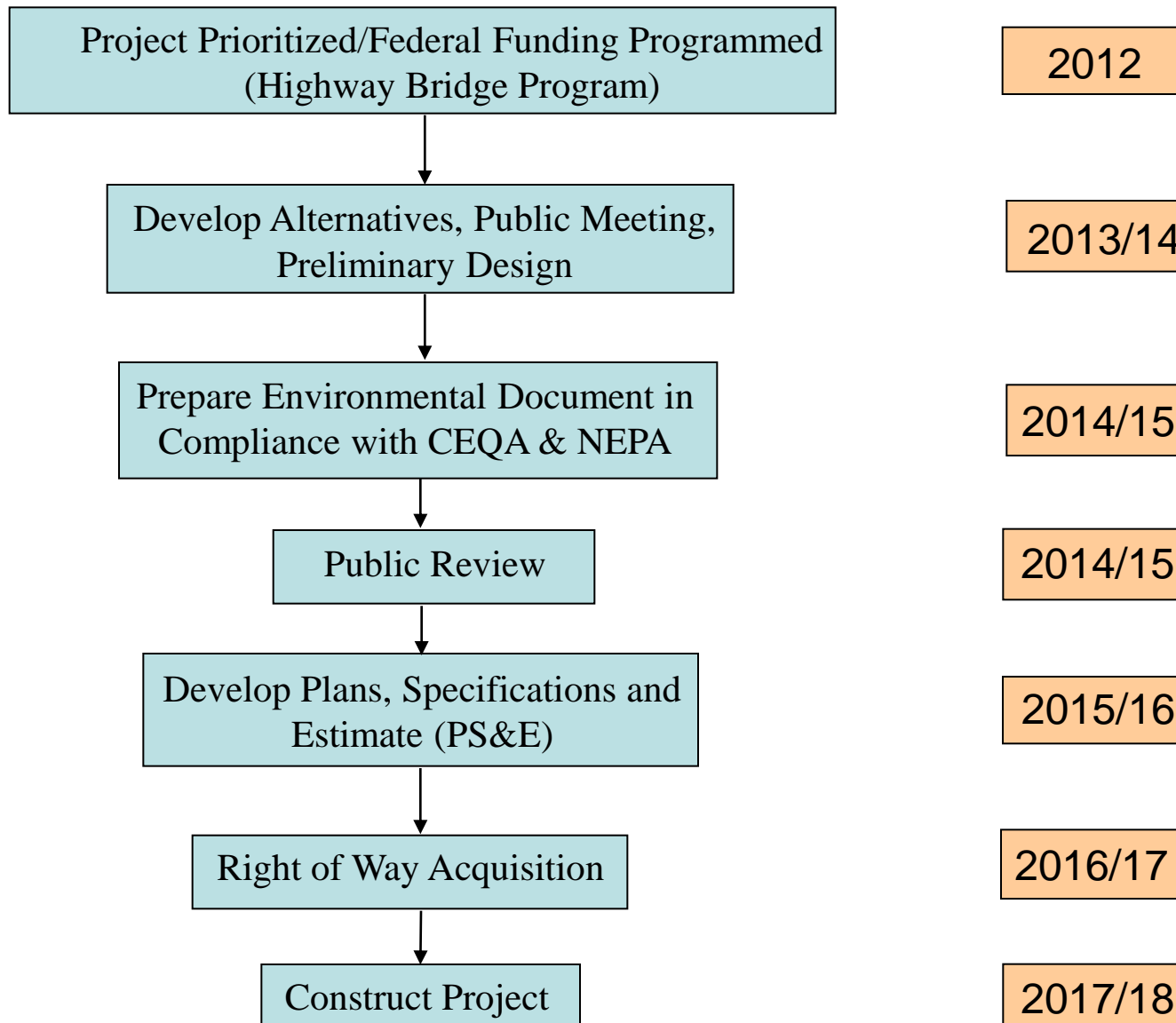


CLEAR CREEK BRIDGES – PUBLIC INFORMATIONAL MEETING

Metal Beam Guardrail Design Examples



Estimated Project Schedule



Questions or Comments



Fill out a Comment Card Today

**Visit the project website:
www.edcgov.us/bridgeprojects/**

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