Clay Street Bridge Replacement

INFORMATION SHEET

Introduction

The information below is intended to answer questions posed at the January 6, 2016 Community Meeting and to provide information to the community and project stakeholders about the Clay Street Bridge replacement project. This information is not being provided as part of, or in lieu of, the formal environmental study and public comment processes.

Some questions have intricate answers. In preparing these answers the project team has attempted to balance a thorough answer in the spirit of the question with brevity to ensure this information is accessible.

Finally, some of the questions posed relate to issues with long histories that pre-date all current City staff. In preparing this Fact Sheet current City staff has researched all available information. ***Any additional information that surfaces in the future will be incorporated into an Fact Sheet in the future!***

The project team, including City of Placerville staff, and members of the Drake Haglan consultant team, will be available to discuss this information at the next community meeting on March 2nd 2016.

1. **Why wasn't the Clay Street Bridge replacement/upgrade addressed with previous development (Cottonwood)? What were the direct requirements associated with that development?**

   Studies and review of the proposed Cottonwood development project did evaluate the need for traffic improvements in 1987 (prior to approval). Included in that evaluation was an assessment of whether or not the existing Clay Street Bridge was sufficient, or whether improvements were needed. It was determined that improvements to the bridge were needed.

   Once a jurisdiction identifies the need for an "offsite" road improvement (a project outside of the immediate area being developed), three factors come into play.

   - If the land development will occur in phases (i.e., multiple subdivision maps), which phase(s) of the project will be conditioned with a requirement?
   - Can the development be conditioned with 100% of the cost/responsibility for the improvement, or only a percentage or portion?
   - Is there a specific correlation between when land is developed vis-à-vis when the offsite related transportation project will be constructed?

   Based upon the above considerations, the Clay Street Bridge widening or replacement was required to contribute a fair share to the bridge improvement, which was an existing deficiency prior to Cottonwood. As of this moment, the City has collected $65,817 towards what was 20% of the

anticipated local match for the Federally Funded project. The Cottonwood development will still be required to contribute towards the project and the remaining phases are developed.

2. **Why do we need to widen the bridge so much? Can we just install signage denoting a one-lane bridge to minimize the width?**

The Highway Bridge Program will not allow a bridge to be replaced with a one-lane bridge that is on a 2-lane roadway. There is no option for a 1-lane bridge replacement project, based upon applying current design standards to the Clay Street location.

For a two-lane bridge, applicable engineering standards (American Association of State Highway and Transportation Officials, AASHTO) require minimum 11-foot lanes in each travel direction, plus a minimal shoulder, and curbs, gutters, and sidewalks. Meeting these requirements, the minimum width of the bridge would be 32 feet between curbs (11' lanes and 5' shoulders) and a 6' sidewalk on each side, excluding the bridge railings.

The applicable tables from the AASHTO standards are shown below.

Table 5-5. Minimum Width of Traveled Way and Shoulders

Metric					U.S. Customary				
Design Speed (km/h)	Minimum Width of Traveled Way (m) for Specified Design Volume (veh/day)				Design Speed (mph)	Minimum Width of Traveled Way (ft) for Specified Design Volume (veh/day)			
	under 400	400 to 1500	1500 to 2000	over 2000		under 400	400 to 1500	1500 to 2000	over 2000
20	5.4	6.0[a]	6.0	6.6	15	18	20[a]	20	22
30	5.4	6.0[a]	6.6	7.2[b]	20	18	20[a]	22	24[b]
40	5.4	6.0[a]	6.6	7.2[b]	25	18	20[a]	22	24[b]
50	5.4	6.0[a]	6.6	7.2[b]	30	18	20[a]	22	24[b]
60	5.4	6.0[a]	6.6	7.2[b]	40	18	20[a]	22	24[b]
70	6.0	6.6	6.6	7.2[b]	45	20	22	22	24[b]
80	6.0	6.6	6.6	7.2[b]	50	20	22	22	24[b]
90	6.6	6.6	7.2[b]	7.2[b]	55	22	22	24[b]	24[b]
100	6.6	6.6	7.2[b]	7.2[b]	60	22	22	24[b]	24[b]
					65	22	22	24[b]	24[b]
All speeds	Width of graded shoulder on each side of the road (m)				All speeds	Width of graded shoulder on each side of the road (ft)			
	0.6	1.5[a,c]	1.8	2.4		2	5[a,c]	6	8

[a] For roads in mountainous terrain with design volume of 400 to 600 veh/day, use 5.4-m [18-ft] traveled way width and 0.6-m [2-ft] shoulder width.

[b] Where the width of the traveled way is shown as 7.2 m [24 ft], the width may remain at 6.6 m [22 ft] on reconstructed highways where there is no crash pattern suggesting the need for widening.

[c] May be adjusted to achieve a minimum roadway width of 9 m [30 ft] for design speeds greater than 60 km/h [40 mph].

Table 5-6. Minimum Clear Roadway Widths and Design Loadings for New and Reconstructed Bridges

Metric			U.S. Customary		
Design Volume (veh/day)	Minimum Clear Roadway Width for Bridges[a]	Design Loading Structural Capacity	Design Volume (veh/day)	Minimum Clear Roadway Width for Bridges[a]	Design Loading Structural Capacity
400 and under	Traveled way + 0.6 m (each side)	HL 93	400 and under	Traveled way + 2 ft (each side)	HL 93
400 to 2000	Traveled way + 1.0 m (each side)	HL 93	400 to 2000	Traveled way + 3 ft (each side)	HL 93
over 2000	Approach roadway width[b]	HL 93	over 2000	Approach roadway width[b]	HL 93

[a] Where the approach roadway width (traveled way plus shoulders) is surfaced, that surface width should be carried across the structures.

[b] For bridges in excess of 30 m [100 ft] in length, the minimum width of traveled way plus 1 m [3 ft] on each side is acceptable.

3. Do we have a legal need/obligation to do anything?

Related to legal obligations, the City is not typically required to undertake any roadway project although circumstances might provide safety, operational, or capacity reasons to do a project.

In this case, the Clay Street bridge replacement was previously identified as one of the mitigations for the Cottonwood development (see additional information above) and therefore there are legal considerations associated with completing (or not completing) the project.

As above, outside of legal obligations, the City is responsible for the general welfare of the community which includes the safety of motorists, pedestrians, and cyclists.

The existing Clay Street Bridge has long been listed as functionally obsolete. It lacks adequate sidewalks, bicycle facilities, and the barrier rail is not of sufficient height for general fall protection (currently 24" compared to the standard 42"). The structural competency is unknown, as record drawings have not been located indicating type and size of the foundations, thus making its safety an uncertainty with 50 and 100-year floods. Finally, the height of the bridge does not meet requirements for the 100-year design storm.

An important, related consideration is that when the City designs a roadway improvement, it is generally obligated to upgrade obsolete features of the existing facility to current engineering and City-approved standards.

4. **Is parking allowed along the Clay Street undercrossing of Highway 50? Will parking be allowed if the Clay Street Bridge project happens? Related, is the Clay Street undercrossing of Highway 50 adequate width to align/conform to proposed Clay Street Bridge width and alignment? Provide information related to two scenarios – with and without on-street parking in the undercrossing section of Clay Street.**
   Clay Street has sufficient width to conform at the Highway 50 overcrossing to accommodate the proposed project.

   Currently, parking is restricted on the west side of Clay Street under the Highway 50 overcrossing. Parking is allowed on the east side of the Clay Street undercrossing.

   Additional parking restrictions from the Highway 50 Overcrossing, south on Clay St, may be required as a result of this project, and will be determined during the design process.

   Moreover, based upon public comment, City staff is evaluating whether parking should be restricted on the east side of the Clay Street undercrossing, regardless.

5. **Have you looked at options for alternative routes out of the Cottonwood development and other properties on Clay Street north of the project area?**
   Yes. The original studies for the proposed Cottonwood project evaluated access in and out of the development and identified road projects to improve access, including improved connections to Mosquito Road and replacement of the Clay Street Bridge.

   As part of the Clay Street Bridge replacement project new traffic studies are being completed related to existing conditions and future conditions with and without the new bridge.

6. **Is it possible to avoid realigning Clay Street and simply prohibit left turns from Clay Street onto Main Street?**
   It is physically possible to replace the Clay Street Bridge without realigning Clay Street.

   Regardless of whether left-turns are prohibited onto Main Street, Clay Street will shift approximately 15 to 20 feet to the east to accommodate building setbacks and an existing driveway, and will be 20 to 24 feet wider than current to complete curbs, gutters, and sidewalks. As a result maintaining the 'current' alignment of Clay Street still requires the east side of Clay Street to move a total of 15 to 20 feet to the east.

   This shift to the east further reduces the off-set between the Cedar Ravine/Main Street intersection and the new Clay Street intersection from the existing 100 feet to 80 feet.

   The minimum off-set for intersections in similar circumstances is no less than 100 feet. Existing traffic volumes and other conditions do not support an exception to a standard design, given the likely safety and operational issues that would result.

As a result, the option of maintaining the existing Clay Street alignment has been determined to not be a feasible alternative.

Eliminating left-turns into and from Clay Street are not viable variations, for a number of reasons. One obvious, undesired result would be furthering the existing driver behavior of using the Ivy House Parking Lot as a bypass for the Clay Street / Main Street intersection.

7. **Why replace Clay Street Bridge before other high priority bridges (in the area), i.e. Placerville Drive over Hangtown Creek?**
   The City has a Capital Improvement Program and other planning studies that prioritize bridge replacement projects.

   The City currently has three (3) active bridge replacement projects.

   - The Blairs Lane bridge over Hangtown Creek, which is scheduled to begin construction in 2016.
   - The Clay Street Bridge over Hangtown Creek, which is currently in the preliminary design and environmental study phase.
   - The Placerville Drive Bridge, which is currently in the engineering study and conceptual design phase.

   There are a number of factors that influence priorities which are ultimately set by the City Council, including annual Caltrans bridge inspection reports which include sufficiency ratings and evaluations of obsolete features and conditions.

8. **It would be helpful to have documentation of the history of flooding/inundation occurrences on the existing Clay Street Bridge.**
   The City does not keep formal records regarding flooding/inundation. The most significant past storms were in 1996 and 2005.

   More recently, the December 30-31, 2005 storm event produced 5.4-inches of rain that corresponds to a 25-50 year storm event (statistical chance of occurring once every 25-50 years). During that storm, the peak 2-6 hour rainfall quantities were responsible for the peak discharges of a 10 year storm (once every 10 years). Flooding was seen along Hangtown Creek throughout town.

9. **Confirm design storm event for bridge.**
   The Bridge will be designed to maintain 2-feet of "freeboard" (distance between the top of water to bottom of bridge) for a 50-year storm and 1-ft of freeboard for a 100-year storm.

10. **Define minimum applicable (State and/or Federal) design standards that the bridge will be required to meet, particularly that relate to height, width, sidewalks, bicycle lanes, and other major features.**
    Clay Street is defined in the City's General Plan as a "Local Street" where lanes are to be 16-ft minimum with a 2-ft gutter and 5-ft minimum sidewalk on both sides. AASHTO requires an 11-ft minimum lane

width, therefore the City should construct an 11-ft lane with 5-feet dedicated to cyclists to be within the City's General Plan requirements. AASHTO requires 6-foot sidewalks.

11. **How does the 2014 State Law 'requiring' motorists to provide a 3-foot clear space from cyclists apply to Clay Street?**
On September 23, 2013 the Governor signed Assembly Bill No. 1371 which included Vehicle Code section 21760.

(a) This section shall be known and may be cited as the Three Feet for Safety Act.

(b) The driver of a motor vehicle overtaking and passing a bicycle that is proceeding in the same direction on a highway shall pass in compliance with the requirements of this article applicable to overtaking and passing a vehicle, and shall do so at a safe distance that does not interfere with the safe operation of the overtaken bicycle, having due regard for the size and speed of the motor vehicle and the bicycle, traffic conditions, weather, visibility, and the surface and width of the highway.

(c) A driver of a motor vehicle shall not overtake or pass a bicycle proceeding in the same direction on a highway at a distance of less than three feet between any part of the motor vehicle and any part of the bicycle or its operator.

(d) If the driver of a motor vehicle is unable to comply with subdivision (c), due to traffic or roadway conditions, the driver shall slow to a speed that is reasonable and prudent, and may pass only when doing so would not endanger the safety of the operator of the bicycle, taking into account the size and speed of the motor vehicle and bicycle, traffic conditions, weather, visibility, and surface and width of the highway.

12. **Outside of roadway/bridge design standards, what other regulatory standards apply to the project design and construction?**
Americans with Disabilities Act (ADA), City Code, City General Plan, City Pedestrian Circulation Plan, Main Street Streetscape Design Development Plan, El Dorado Transportation Commission's Non-Motorized Transportation Plan.

13. **Each alternative being evaluated needs to clearly state the impact on existing parking spaces.**
As preliminary and final alternatives are developed, the impact on parking spaces (by number and type) will be calculated and stated for public evaluation.

14. **Each alternative being evaluated needs to clearly delineate any impact to C & H Motor Parts.**
As final alternatives are developed, the conflict with any existing utility (such as utility poles, underground utilities, etc.) will be identified, and the need to acquire any temporary or permanent land rights from private owners will also be identified.

An example of a temporary right would be an easement needed during construction only.

The traffic study and other preliminary engineering work would also determine any operational impacts to access to/from private properties.

15. **Each alternative being evaluated needs to clearly delineate any impact on Locust Street (parking) and creek overlook/park.**
    As preliminary and final alternatives are developed, the impact to existing parking and the existing overlook area will be identified for public evaluation.

16. **How will each alternative provide for a safe pedestrian connection north of the bridge?**
    As preliminary and final alternatives are developed, connections for motorized vehicles, bicyclists and pedestrians will all be shown and available for public review.

17. **Provide traffic analysis that shows conditions with and without the proposed project.**
    The City is preparing new traffic analysis that will provide information with and without the proposed project for public evaluation and review.

18. **Provide a summary of accident data, including type and cause information.**
    See the attached exhibit at the end of this Fact Sheet. This data is for the 4 year period from January 2010 through December 2014.

19. **Correlate accident history to each proposed design alternative.**
    As preliminary and final alternatives are developed, design features will be correlated to the documented accident history.

    It is important to note that accident history is a very important indicator of safety, but not the only indicator.

20. **Identify locations for relocating the Druid monument for each proposed alternative.**
    As final alternatives are developed, one or more locations for the Druid monument will be identified. When preliminary alternatives are presented in March, conceptual options can be discussed.

21. **Identify locations to relocate community adopt-a-garden for each proposed alternative.**
    As final alternatives are developed, one or more locations for the community garden will be identified. When preliminary alternatives are presented in March, conceptual options can be discussed.

22. **Evaluate impact on emergency vehicle response times.**
    The traffic study will determine delays associated with traffic, and in particular at the Clay Street / Main Street intersection.

    The project alternatives and traffic study will be reviewed with emergency responders to obtain further input on the benefit/dis-benefit to emergency response times.

23. Discuss how widening Clay Street will affect/increase(?) vehicle speeds on Clay Street.

The traffic study and related reports will provide information about projected vehicle speeds. However, this analysis is focused on vehicle speeds related to delays associated with traffic congestion.

Related to potential, unsafe increases in speed, the roadway will be designed for a safe speed and the potential need for traffic calming measures within the project limits will be evaluated.

As discussed below, the engineering of the project will provide the basis for enforcement of traffic laws.

24. Provide a timeframe for the environmental documents to be available for public review.

This information will be available at Community Meeting #3, tentatively scheduled for June, 2016.

25. Address relationship of the prior Court ruling related to the Clay Street project/environmental document, and the recent El Dorado Trails Project in the Clay Street vicinity.

The El Dorado Trail connection from Mosquito Road to Clay Street and the Clay Street bridge replacement project both date back more than 20 years.

Several years ago it appeared that the El Dorado Trail extension (including the Clay Street crossing) and the Clay Street bridge project would both be design and constructed at about the same time.

At that time the El Dorado Trail extension was coordinated with the Clay Street project as a way to coordinate the designs and implement and construct the separate projects simultaneously (ultimately reducing overall project costs). Once the Court Order was issued, the El Dorado Trails proceeded with a separate environmental document and circulated for public comment

No comments were received so the City continued with design and construction. This approach also ensured that funding for the trail extension was not lost.

26. What are engineering solutions versus enforcement solutions (of traffic violations)?

In roadway projects engineering solutions can be applied to address safety, capacity, and operational issues.

Engineering solutions involve making physical improvements based upon standards to best ensure vehicular control and to reduce driver confusion, and to provide a level of safety and comfort for all modes of the traveling public (motorists, bicycles, and pedestrians). Elements of engineering solutions include distances, widths and dimensions of traffic lanes, shoulders, sidewalks, etc. Engineering solutions also include applying the correct materials and pavement types, pavement striping and delineation, and adequate lighting.

In addition to looking at each element of a project, engineering solutions also consider the project elements as a whole. In the case of the Clay Street bridge project, engineering solutions are evaluating the separate intersections at Cedar Ravine/Main Street and Clay Street/Main Street as a couplet.

Included in engineering solutions are considerations for appropriate traffic calming measures. Traffic calming can reduce vehicle speeds and increase driver awareness.

The most complex elements of engineering involve evaluating real world conditions and applying engineering judgement to a specific circumstance.

Enforcement solutions can be either targeted or general. Enforcement of traffic laws are an important counterpoint to engineering solutions. A properly engineered street still requires enforcement to best ensure the safety of the traveling public, and a well patrolled street is not necessarily well designed or optimally safe.

27. Interested in seeing traffic study assessment of a traffic signal at Clay Street/Main Street intersection, in comparison to a 4-way stop.

Yes. A traffic study is nearly complete. The information from the traffic study, including the need for, and/or benefit of, a traffic signal, is being addressed. This information is expected to be available at Community Meeting #3, tentatively scheduled for June.

28. How will emergency response times/routes be impacted during construction?

During preliminary design, concepts for construction staging and traffic control will be considered. As part of this work, emergency response routes and times will be considered.

During final design, construction staging plans and traffic control plans will be prepared, and will be discussed during a community meeting.

Construction staging plans and traffic control plans will be discussed with emergency responders for their comments, and fully considered.

29. During construction, if a 4-Way stop alternative is selected, will the intersection be outfitted with conduit for future 4-Way traffic signal?

This question will be evaluated during the design, and will consider several factors, including the traffic study. At this time, we are anticipating that we would provide conduits if the intersection is signalized in the future.

Future community meetings will provide an update on this topic.

30. Explain relationship (legal, other) of this "new" environmental process to prior E.I.R. and environmental process.

Previously, an Initial Study/Mitigated Negative Declaration (IS/MND) was prepared for the proposed project and adopted by the City Council. That document was challenged by "Friends of Historic Hangtown" and the Superior Court of CA ruled in favor of the petitioner that the City of Placerville failed to comply with the provisions of CEQA and that the IS/MND did not consider potential impacts to traffic, parking, urban decay, biology, cultural resources, toxic, aesthetic, and growth inducing impacts and

inconsistency with area plans and policies. The court ordered that the previously listed impact areas be studied in an Environmental Impact Report (EIR). An EIR is prepared whenever there is substantial evidence, in light of the whole record, that a project may have a significant effect on the environment.

The EIR process requires a public noticing and meeting requirements that are different than the IS/MND process and requires a formal response to comments chapter in the final EIR.

An EIR process allows for the adoption of a project that has impacts that cannot be fully mitigated through a Statement of Overriding Considerations process.

Collision Type

- Auto-Pedestrian
- Hit Object
- Sideswipe
- Other
- Rear End
- Broadside

Source: SWITRS, January 2010 - December 2014

Collision History