PROJECT STUDY REPORT – PROJECT REPORT EQUIVALENT

On Fifth Street

Between Shasta Street in Yuba City, Sutter County

And J Street in Marysville, Yuba County

APPROVAL RECOMMENDED:

KEVIN BRADFORD, Project Manager

APPROVED:

GEORGE MUSALLAM, Public Works Director

4/8/13
DATE

This Project Study Report-Project Report has been prepared under the direction of the following registered 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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5/24/2013

DATE

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1. INTRODUCTION

The City of Yuba City, in cooperation with the City of Marysville and the California Department of Transportation (Caltrans), proposes to replace the 5th Street Bridge (Bridge Number 18C-0012) over the Feather River and improve approach roadways to the bridge. The City has obtained authorization for replacement and has initiated project development with Caltrans Local Assistance oversight.

The bridge is rated as "functionally obsolete" by Caltrans under Federal Highway Administration (FHWA) prescribed inspection criteria. This rating is due to inadequate lane and shoulder widths. In addition, traffic forecasts show that intersection and roadway segments at and nearby the bridge will operate at failing levels of service by 2035 and widening of the facility from the existing two lanes to a four-lane structure would provide needed improvements to the transportation network between Yuba City and Marysville. The project would also improve pedestrian and bicycle movements between the two cities over the Feather River.

The Sacramento Area Council of Governments (SACOG) includes the project in their 2035 Metropolitan Transportation Plan (MTP), identifying the need for more capacity over the Feather River between Yuba City and Marysville. The 5th Street Bridge, along with the 10th Street Bridge just to the north, represent the only crossings of the Feather River in a 40 mile reach. In addition, the project is consistent with Yuba City and Marysville General Plans. This proposed project would replace the functionally obsolete bridge, respond to current congestion and improve circulation between the two cities.

Table 1: Summary of Key Project Information

Project Limits 3-SUT/YUB-5TH	Along 5th Street from Bridge Street and Shasta Street in Yuba City to J Street in Marysville, including portions of Bridge Street and 2nd Street in Yuba City and portions of J Street, 3rd Street, and River Front Park in Marysville.
Capital Costs:	$ 58,198,400
Right of Way Costs:	$ 2,355,600
Funding Source:	High Priority Projects (HPP) Regional Surface Transportation Project (RSTP) Highway Bridge Program (HBP) Local Agencies
Number of Alternatives:	Five (5)
Alternative Recommended for Funding	The Recommended Alternative is Alternative 1 – North Alignment, under UPR
Type of Facility (conventional, expressway, freeway):	Urban Major Arterial
Number of Structures:	Two (2)
Environmental Determination/Document	CEQA Initial Study with Proposed Mitigated Negative Declaration (IS/MND) and NEPA Environmental Assessment leading to a Finding of No Significant Impact (FONSI)

2. RECOMMENDATION/PROPOSAL

This report recommends conceptual approval of the project and approval to circulate the Draft Environmental Document for the 5th Street Bridge Replacement Project over the Feather River.

It is recommended the City of Yuba City approve the Build Alternative, described in Section 5, to replace the 5th Street Bridge with a bridge along a northern alignment, which includes four-12 foot travel lanes, a 4 foot median, 8 foot shoulders, and a separated 10 foot wide Class I multi-use trail, as well as improvements to the approach roadways and replacement of the 2nd Street Overcrossing (Bridge No. 18C-0055) in Yuba City

3. BACKGROUND

The 5th Street Bridge is a major arterial connector between Yuba City and Marysville serving local, commercial, commuter, pedestrian, and bicycle traffic. Built in 1958 to replace the previous bridge, which had been destroyed by flood waters in 1955, the prestressed concrete stringer bridge is approximately 1,865 feet long, 42 feet wide, and carries two 12-foot lanes of traffic across the river. A 10-foot Class I pedestrian and bicycle path is located next to the two vehicular lanes on the north side of the bridge.

The existing facility is located between Sutter and Yuba Counties and connects Bridge Street in Yuba City to 5th Street in Marysville. Project limits in the City of Marysville span from 5th and I Street to I and 3rd Street in the south, portions of River Front Park in the west and continuing over the Feather River into the City of Yuba City limits. Project limits within the City of Yuba City include the roadway along 2nd Street, small portions of Sutter, Yolo and Boyd Streets in the south and the western expanse of Bridge Street at the intersection with 2nd Street and terminating just past the intersection at Shasta Street.

A seismic evaluation was prepared in 1992 and a superstructure retrofit was performed in 1994 providing restrainers, transverse and longitudinal keys to the superstructure. In 2008, Sutter County Department of Public Works retained TRC to prepare a Seismic Vulnerability Evaluation and Rehabilitation/Replacement Strategy Report. The report found the bridge to be seismically vulnerable to soil liquefaction and recommended it for replacement due to high retrofit costs and the age of the bridge.

In 2012, the City of Yuba City applied for Highway Bridge Program funding to replace the two lane bridge with a four lane structure following the latest bridge inspection report, which determined the 5th Street Bridge is functionally obsolete due to inadequate lane and shoulder widths. A combination of Local Agency and Federal funds (Highway Bridge Program, Regional Surface Transportation Project, and High Priority Project) have been approved.

The project would also require replacement of the functionally obsolete 2nd Street Overcrossing (Bridge No. 18C-0055) in Yuba City. Due to the proposed alignment of the 5th Street Bridge replacement and the approach roadway on the Yuba City side, the existing 2nd Street Overcrossing does not match the horizontal alignment or profile of the

proposed roadway. Sight distance on 2nd Street and Sutter Street as they approach Bridge Street is currently hindered by the columns and abutment walls of the 2nd Street Overcrossing and UPR underpass, immediately to the south of the overcrossing. The proposed project would improve sight distance at this intersection by removing the existing overcrossing and underpass. While the new 2nd Street Overcrossing would also be a two span bridge with columns in the median, the spans would be longer with sloped embankments at the abutments to improve overall sight distance of approaching vehicles at the intersection. Since UPR has abandoned the section of railroad which crosses the Feather River and 2nd Street in Yuba City, the UPR underpass would not require replacement. Removal of that structure would be permanent.

During preparation of the Draft Environmental Document, two public meetings were held in Yuba City and Marysville to invite community feedback on proposed alternatives. The meetings were well attended by citizens as well as local council and supervisory board members. Comments included a preference for the four lane bridge alternatives that utilized the existing Union Pacific Railroad underpass in Marysville, rather than a structure that would fly over the railroad or a two lane structure along similar alignments.

4. PURPOSE AND NEED STATEMENT

As described in the introduction above, the project is being proposed to remedy two problems associated with the 5th Street Bridge. The bridge is rated functionally obsolete due to inadequate structural design standards and provides inadequate capacity for current and future traffic demands. The need and purpose are discussed further below.

Need:
The existing 5th Street Bridge is rated "functionally obsolete" by Caltrans under FHWA prescribed inspection criteria. Full replacement of the bridge is needed because the current structure does not meet structural design standards. Additional capacity is needed because traffic forecasts show intersection and roadway segments operating at failing levels of service by 2035.

Purpose:
The purpose of the 5th Street Bridge Replacement Project is to replace a functionally obsolete bridge in order to:

- Enhance safety on one of the two major east-west corridors which link Yuba City and Marysville by providing a safer vehicular, pedestrian, and bicycle crossing over the Feather River;
- Provide a transportation facility consistent with Caltrans Standards, as well as local, regional, and statewide plans.
- Improve levels of service by adding two additional lanes across the Feather River.

5. ALTERNATIVES

Several alternatives were developed and considered by the Project Development Team (PDT). The PDT includes staff from the Cities of Yuba City and Marysville, Caltrans District 3, as well as engineering and environmental consultants (Dokken Engineering,

Fehr & Peers Transportation Consultants, and WRECO, see Section 11). Although several build alternatives were considered in the preliminary planning stage, only one build alternative was selected for full analysis in this document. Other alternatives considered were eliminated from further consideration due to greater environmental impacts, public and agency comments, and cost. The Build Alternative is described below, as well as the other alternatives that were eliminated from further consideration.

5A. VIABLE ALTERNATIVES

Build Alternative (Alternative 1)

Description of work to be done includes:

- Construction of a new four-lane bridge over the Feather River;
- Construction of a new four-lane overcrossing over 2nd Street;
- Expansion of 5th Street from two lanes to four lanes between the new bridge and J Street in Marysville, including four lanes under the Union Pacific Railroad underpass;
- Improvements to the 5th Street and J Street Intersection in Marysville including a new eastbound dedicated right turn lane on to J Street and reconstruction of sidewalks and curb ramps to current ADA standards;
- Removal of stop logs on the top of the Marysville levee and construction of a short three foot floodwall extension from the bridge. Installation of a levee cut-off wall through the central portion of the levee;
- Widening of the 5th Street Bridge approach roadway between 2nd Street and Shasta Street in Yuba City, from two lanes to four lanes;
- Realignment of 2nd Street under the overcrossing, construction of raised median, and extension of the left turn lane from 2nd Street to westbound Bridge Street;
- Reconstruction of the eastbound approach to the bridge and removal of the abandoned UPR underpass above the on-ramps;
- Add on-ramp from Sutter Street to westbound 5th Street; and
- Add signalized intersections at the 2nd Street intersections with Bridge Street and the westbound ramps at the intersection of Sutter Street and 2nd Street in Yuba City.

It is anticipated that the maximum depth of excavation would be 15 feet for the pier foundations and 10 feet at the bridge abutments. These excavations are to prepare the location for fill and placement of footings and piles to support the new bridge.

The project includes a Class I multi-use trail over the river with expanded connectivity in Yuba City. This trail would provide pedestrian and bicycle access over the river between Yuba City and Marysville. The Class I trail would be separated from 5th Street by a barrier and would be constructed with a flatter profile than the roadway at the approach into Marysville where the roadway profile grade exceeds 5%.

Minor relocation of utilities is expected on the bridge approach roadways. The new bridge would contain conduits for bridge lighting, communications and future uses. The new bridge may contain a water line connecting the two independent city systems for use in emergency situations.

The connector roadway from 2nd Street (Sutter Street) to westbound Bridge Street would cross the Gilsizer County Drainage District stormwater detention facility. Some roadway embankment would be placed in the southeast end of the basin. The detention capacity lost to the new embankment would be replaced with additional capacity by developing an adjacent basin in the center of the westbound loop off-ramp.

Because of the size of the project and the nature of expanding the crossing from two lanes to four, most of the staging areas are included in the proposed construction footprint. However additional staging areas may be used as necessary for project construction located in the following places: 1) a paved parking area north of the bridge in Riverfront Park and 2) a portion of the old Feather River Mill Site at the southeast corner of Shasta and Bridge Streets. Both of these areas are included in the project area.

No-Build Alternative (Alternative 5)

The No-Build, or "Do Nothing," Alternative would not improve the transportation corridor along Bridge Street between Yuba City and Marysville. The existing bridge would not be replaced and would remain deficient for travel lane and shoulder width concerns.

5B. REJECTED ALTERNATIVES

Alternatives that were considered and rejected by the PDT include:

Alternative 2 proposed to replace the 5th Street Bridge over the Feather River with an alignment north of the existing structure with a two lane bridge and a Class I multi-use trail.

This alternative was rejected based on the need for 4 lane capacity. The adjacent approaches have four lanes and should continue as such for improved traffic operations and safety between Yuba City and Marysville.

Alternative 3 proposed to replace the 5th Street Bridge with a high profile crossing over the Feather River and Union Pacific Railroad. The proposed 4-lane bridge with a Class I multi-use trail would pass 25 feet above the two Union Pacific tracks and then descend into Marysville on a 7.7% grade.

This alternative was rejected because it has the highest cost of the four alternatives studied and that cost is considered by the PDT to be prohibitive. The proposed bridge would be a cast-in-place, post-tensioned, concrete box girder structure 84.5 feet wide and 3,038 feet long. The design requires 1,200 feet to reach grade at Third Street after crossing the UPR tracks and requires 2 full parcel acquisitions. One of the parcels is a historic property used as a Salvation Army Women and Children's Shelter and acquiring the parcel would have many social and historical impacts.

Alternative 4 proposed to replace the 5th Street Bridge over the Feather River with an alignment south of the existing structure. The proposed bridge crossing would have a straighter alignment with the approaching roadways, as well as have a 4-lane design with a Class I multi-use trail. The south alignment would require the removal of the Northern Electric Railroad Bridge, which has been determined a historic resource eligible for inclusion in the National Register of Historic Places. The southern alignment would also impact the Veterans Memorial Park in Yuba City. Both the railroad bridge, as a historic resource, and the park, as a recreational facility, are protected under Section 4(f) of the Department of Transportation Act of 1966.

The alternative was rejected due to the expected substantial impacts to both the historic railroad bridge and the Veterans Memorial Park as Section 4(f) resources. Section 4(f) requires that if a reasonable and feasible avoidance alternative is available, it must be selected over other alternatives that would substantially impact Section 4(f) resources.

Conversion of the Union Pacific Railroad Bridge was considered as an alternative for obtaining two additional lanes for Fifth Street over the Feather River. However, this alternative was rejected based on the costs to convert the existing structure to a highway structure that meets current highway and seismic design requirements. The cost to convert the existing structure is nearly equivalent to the cost of constructing 2 new lanes of the new structure. The bridge was also considered for conversion to a bicycle and pedestrian only facility. Again however, the life cycle cost analysis favored constructing the trail as part of the new bridge.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. DESIGN CONSIDERATIONS

The proposed design for the Build Alternative balances considerations for connections to existing facilities, current National and State regulations for flood control clearance, bike and pedestrian facilities, structural standards and safety, as well as local considerations for speed, lane and shoulder widths, traffic patterns and connectivity.

The project will connect the existing four-lane roadways of Bridge Street in Yuba City and 5th Street in Marysville, which are currently linked by the two-lane bridge. The posted speed limit in Yuba City along Bridge Street approaching Shasta Street eastbound is 25 miles per hour (mph). Approaching Shasta Street westbound, the speed limit over the bridge is 35 mph and changes to 25 mph at Shasta due to the school zone for Bridge Street Elementary School. The posted speed limit in Marysville in the vicinity of the project is 30 mph.

The proposed project would use a design speed of 45 mph in Yuba City, 40 mph over the bridge, and 35 mph into Marysville as 5th Street crosses under the UPR railroad structure. These design speeds were chosen to balance the following criteria:

- Clearance over the 100-year base flood water surface elevation
- Clearance under the UPR grade separation

- Safety considerations, such as sight distance and horizontal curvature

The Project achieves required clearance over the base flood water surface elevation, as well as clearance over existing levee elevations. The base flood is that flood which has a one percent chance of occurrence in any given year (100-year flood). Potential flooding conditions for the proposed Project were evaluated based on the 100-year floodplains depicted on FEMA Flood Insurance Rate Maps (FIRMs). Based on available data, traffic interruptions due to the base flood would not be present at the Project site because the 100-year base flood is contained in the Feather River channel. The roadway elevation at the bridge is higher than the 100-year and 200-year design flood water surface elevations at the Feather River crossing, which would make it possible to keep the 5th Street Bridge open to emergency traffic in the event of flooding.

The proposed Project meets current UPR regulations, which require 16.5 foot veritcal clearance from roadway surfaces to the soffit of railroad structures. In order to achieve clearance over the Feather River levee and under the existing UPR structure, the design speed used to determine vertical curves and sight distance at the Marysville approach was set at 35 mph. The profile grade has a maximum value of 6.5% for less than 200 feet at the Marysville approach to achieve the transition between the levee and UPR structure. Minimum vertical curve length which provides headlight sight distance in this sag is maintained, thus special lighting at this location is not required.

As the proposed alignment of 5th Street approaches the UPR underpass, the two eastbound travel lanes split to utilize the existing openings in the structure, as depicted in Figure 5 in Section 6C.

6B. REGIONAL AND SYSTEM PLANNING

Regional Transportation Plans

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba as well as 22 cities in the region. SACOG has been designated by the Governor as the Metropolitan Planning Organization (MPO) for this region. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air and airport land uses. The project is listed in the 2035 SACOG Metropolitan Transportation Plan.

Local General Plans

General Plans are prepared pursuant to state mandates which require every city and county within the state to adopt a comprehensive, long-term general plan for the physical development of the community and lands located inside its boundary, which in the planning agency's judgment, bears a relation to its planning. Additionally, General Plans establish a comprehensive document which can improve coordination of community development activities among all units of government. The proposed project's Build Alternative would be consistent with the General Plans from both Yuba City and Marysville. The No-Build Alternative would not be consistent as it would not improve conditions for safety, circulation, aesthetics, levels of service, and balancing future development with system circulation.

Emergency Services

Yuba City is served by the Yuba City Fire Department and Yuba City Police Department for emergency services. Marysville is served by the Marysville Fire Department and Marysville Police Department for emergency services. Both cities receive paramedic services from the Fire Department and local hospital ambulances. All of the above listed emergency services use the 5th Street Bridge for access between the two cities.

The proposed project would have no adverse effects on emergency response planning, emergency access and risk exposure. The increased capacity on the new bridge (four lanes) would relieve traffic congestion and allow for faster emergency response times. Project features, such as the addition of sidewalks, bike lanes and generally improved ADA access, would improve safety for pedestrians and bicyclists.

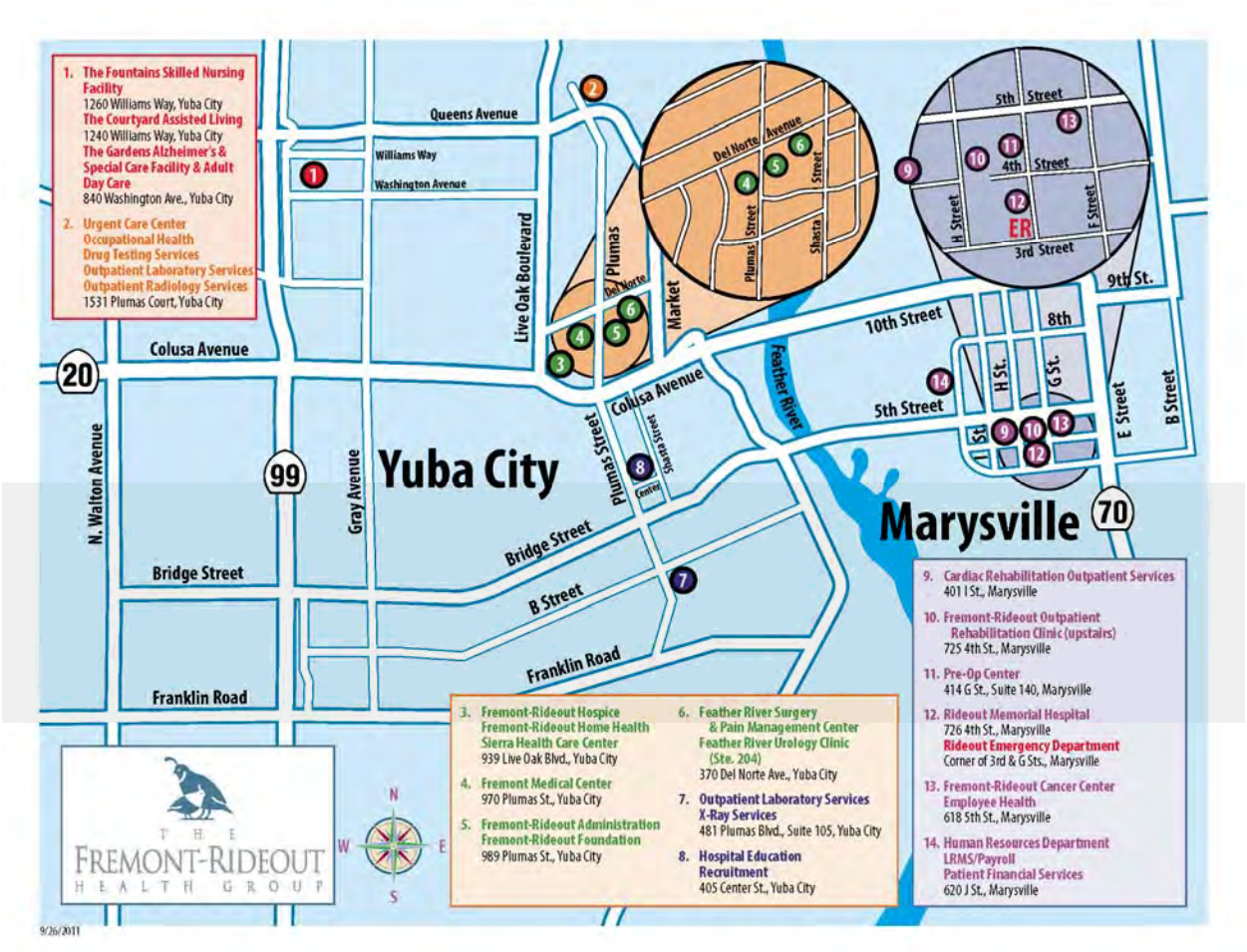
Traffic congestion and delays can occur during construction; however, these effects can be avoided through standard traffic management planning which may include timely notification of any lane closures to police and fire departments, the California Highway Patrol and other emergency service providers. The project has been designed to ensure that access across the 5th Street Bridge will remain open throughout construction. The new bridge will be built in stages such that two lanes on the new bridge will be built and opened for traffic prior to closure and demolition of the existing bridge. The 3rd and 4th lanes would then be constructed and the full width bridge would be opened to traffic. This will ensure that emergency services will retain full access between the two cities for the entirety of the construction period.

Under the No Build Alternative, the existing condition would not change and would therefore have no effect on emergency services.

Regional Hospital Access

Rideout Health Group operates two local medical centers in the Yuba-Sutter community. Figure 1 shows the relative locations of services in the Yuba City and Marysville area compared to the roadway network and the two limited river crossings. Fremont Medical Center is located in Yuba City on Plumas Street north of Colusa Avenue (SR-20), approximately one mile from the project. Rideout Memorial Hospital is located in Marysville on 4th and G Streets, approximately 0.33 miles from the project. Currently under construction, Rideout Regional Medical Center is expected to open in January 2015, near the existing site of Rideout Memorial Hospital, and will be the premier regional hospital for Yuba and Sutter Counties and surrounding Cities. As discussed above, police, fire, and emergency responders use 5th Street Bridge to respond to emergencies and to access the hospital and future medical center. The proposed project would improve access to the regional hospital network.

Figure 1: Rideout Health Group Regional Hospital Network

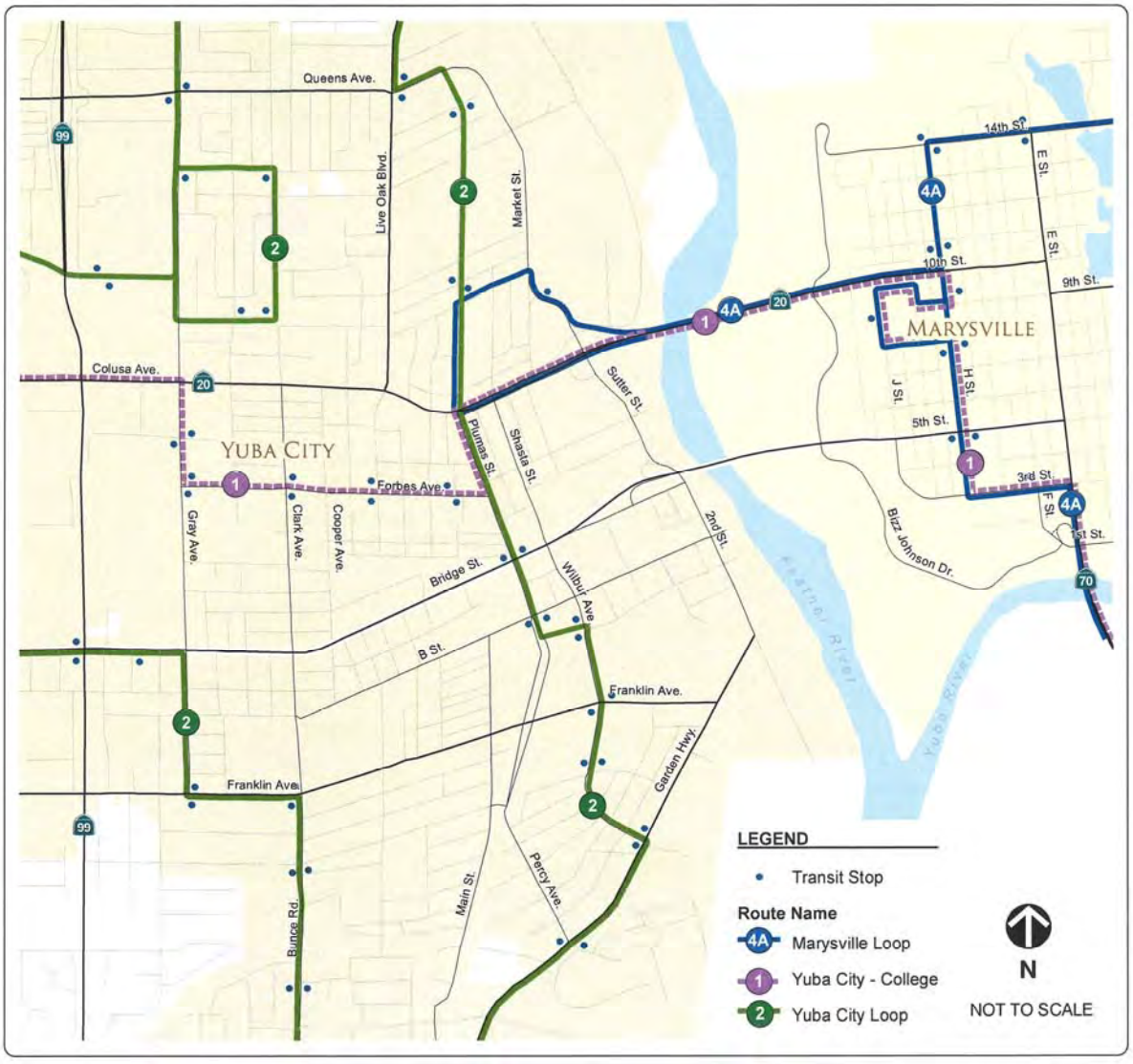


Source: Rideout Health Group, www.frhg.org, March 2013

Regional Transit

Figure 2 displays the existing transit routes in Yuba City and Marysville, which are operated by Yuba-Sutter (Y-S) Transit. There are currently no transit routes that use the 5th Street Bridge, due to the typical potential for congestion on the link. However, portions of the 5th Street/Bridge Street corridor are served by the Yuba City Loop (Route 2), with stops near Plumas Street and Gray Avenue. Y-S Transit would consider adding scheduled bus service routes on a new 4-lane 5th Street Bridge crossing. Y-S Transit also offers dial-a-ride services, which are not confined to the route map and would benefit from less congestion on the 5th Street Bridge as they transport clients from both counties to the medical center in Marysville.

Figure 2: Existing Intersections Analyzed for Traffic Impacts



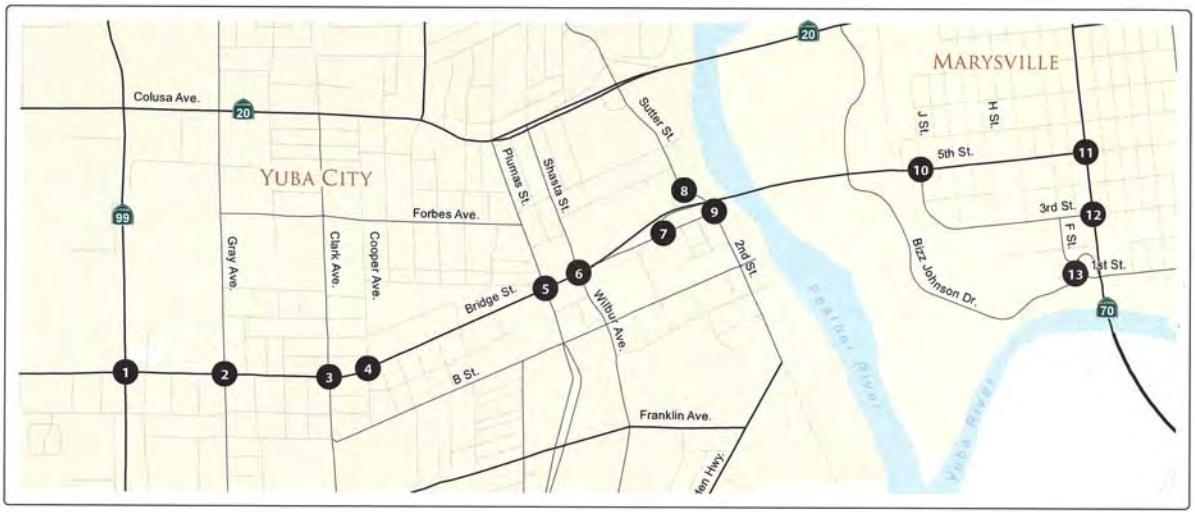
Source: Fehr & Peers, Traffic Study 2011

6C. TRAFFIC AND CORRIDOR IMPACTS

The *Traffic Report for the 5th Street Bridge Replacement Project Study Report/Project Report* (Fehr & Peers 2011) was prepared in conformance with methodologies that were developed in coordination with Caltrans, Yuba City, and Marysville. Traffic impacts were analyzed, along the Bridge Street/5th Street corridor, based upon the effects from area-wide development and general population growth. Development included both the proposed project and nearby future projects. Traffic counts were collected and an AM and PM peak hour analysis was performed for the following intersections, listed here and shown in Figure 3.

1. Bridge Street/SR 99
2. Bridge Street/Gray Avenue
3. Bridge Street/Clark Avenue
4. Bridge Street/Cooper Avenue
5. Bridge Street/Plumas Street
6. Bridge Street/Shasta Street
7. Bridge Street/5th Street Eastbound On-Ramp
8. 5th Street Westbound Off-Ramp/Sutter Street
9. Bridge Street/2nd Street
10. 5th Street/J Street
11. 5th Street/SR 70
12. 3rd Street/SR 70
13. SR 70 Southbound On-Ramp/F Street

Figure 3: Existing Intersections Analyzed for Traffic Impacts



Source: Fehr & Peers, Traffic Study 2011

Existing Traffic Facilities

The 5th Street Bridge is a two-lane bridge that spans the Feather River. It is situated approximately 1/3-mile downstream from the four-lane SR 20 Bridge (the other major connector between Yuba City and Marysville). The 5th Street Bridge is elevated above Sutter Street, the Feather River, Riverfront Park, and Biz Johnson Drive for a total length of nearly a half mile. The bridge has a posted speed limit of 35 miles per hour (mph).

Bridge Street begins west of SR 99 and extends in an east-west direction through Yuba City, terminating at 2nd Street. An on-ramp from eastbound Bridge Street forms the beginning of the 5th Street Bridge. Westbound motorists on the 5th Street Bridge connect directly with Bridge Street. East of SR 99, Bridge Street has four lanes and a posted speed limit of 35 mph with the exception of the 1,900-foot segment of Gray Avenue to Cooper Avenue, which has two lanes and a posted speed limit of 25 mph. Bridge Street provides access to predominately commercial uses as well as an arterial connection with SR 99.

5th Street begins east of SR 70 and extends in an east-west direction through Marysville, becoming the 5th Street Bridge. Between SR 70 and 3rd Street, it is a four-lane undivided roadway with a posted speed limit of 30 mph. 5th Street provides access to a mixture of commercial and residential uses in the surrounding area as well as an arterial connection with SR 70.

The traffic analysis examined the bridge and roadway connecting the two cities, ramp junctions, and the intersection operations under the existing conditions. The 13 study intersections all currently operate at acceptable levels of service (LOS) with the exception of the Bridge Street/2nd Street intersection (LOS E operations during PM peak hour). Table 2 shows existing LOS at the 13 intersections in the project area.

Vehicle Queuing

Vehicle queues were observed throughout the study corridor. In most instances, maximum queues remained within the available turn lane storage. However, several notable exceptions were observed:

- Northbound SR 70 left turn lane at 5th Street: The northbound left-turn lane features 150 feet of vehicle storage. Field observations reveal that vehicle queues regularly spill out of the turn pocket and into the 3rd and 4th Street intersections.

- Eastbound 5th Street through/right at J Street: The eastbound approach consists of a single lane at the UPRR trestle bridge (375 feet west of the intersection), and then widens to three lanes at the J Street intersection. Vehicles were observed to regularly queue back to the trestle bridge and beyond.

- Bridge Street between Clark Avenue and Cooper Avenue: This segment of Bridge Street has one lane in each direction. The traffic signals at Clark Avenue and Cooper

Avenue are situated about 470 feet apart. This close spacing causes traffic to occasionally spill back from one intersection to the other.

Bottleneck Locations

Field observations and travel time runs revealed the following bottleneck locations along the study corridor:

- Eastbound: Bottleneck locations include the single through lane on Bridge Street from Gray Avenue to Cooper Avenue, imbalanced lane usage at the Plumas and Shasta Street intersections (inside through lane more heavily used in anticipation of accessing the 5th Street Bridge on-ramp), and the 5th Street Bridge merge (located east of the on-ramp).

- Westbound: Bottleneck locations include the heavy left-turn movements on northbound SR 70 at 3rd Street and 5th Street, the merge point just west of the 5th Street/J Street Intersection, and the single through lane on Bridge Street from Cooper Avenue to Gray Avenue.

- 5th Street/J Street Intersection: Causes moderate delays and queuing, but is not currently a major bottleneck in the corridor.

These locations do not necessarily "meter" or limit the amount of traffic that is able to travel through the corridor. Rather, they are locations known to cause increases in delays, which may potentially be affecting motorists' choice of travel route.

Circulation Consideration along Bridge Street

The eastbound on-ramp to the Fifth Street Bridge has been retained at the current mid-block location between Boyd Street and Yolo Street. This was done intentionally to ensure that Boyd Street would not be selected as an alternative to Shasta Street for vehicles heading eastbound on Fifth Street. If the Fifth Street on-ramp was aligned with Boyd Street, it would attract vehicles into Boyd Street attempting to avoid the Shasta/Fifth Street intersection. Also, for vehicles coming from Second Street and heading eastbound on Fifth Street, the selected mid-block location results in a shorter path of travel.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities, such as sidewalks, in the project area are located on 5th Street, Bridge Street, and several other adjacent roadways in Yuba City and Marysville as sidewalks. The existing bridge also has a Class I separated 10-foot wide path for bicycle and pedestrian use. The path over the bridge connects with other paths on the Yuba City side associated with the levee. Some of these connections are lacking ADA access. Intersections in the project area predominantly include crosswalks.

Accident and Safety Information

Although the existing facilities have not reported accident data in excess of state or federal averages, the existing two lane bridge does pose a substantial problem for accident safety. During an accident event, or even a simple breakdown, the bridge becomes a gridlock and poses access challenges for responding emergency or tow-truck vehicles. Clearing accidents on the bridge usually requires full closure of the bridge to deal with the emergency situation.

Table 2: Level of Service for Existing Intersection Conditions

Intersection		Jurisdiction (Minimum Acceptable LOS)	Control	Peak Hour	Existing Conditions	
					Delay (sec/veh)	LOS
1	Bridge Street / SR 99	Caltrans (E)	Traffic Signal	AM	34	C
				PM	53	D
2	Bridge Street / Gray Avenue	Yuba City (D)	Traffic Signal	AM	25	C
				PM	40	D
3	Bridge Street / Clark Avenue	Yuba City (D)	Traffic Signal	AM	29	C
				PM	41	D
4	Bridge Street / Cooper Avenue	Yuba City (D)	Traffic Signal	AM	32	C
				PM	36	D
5	Bridge Street / Plumas Street	Yuba City (D)	Traffic Signal	AM	35	D
				PM	39	D
6	Bridge Street / Shasta Street	Yuba City (D)	Traffic Signal	AM	17	B
				PM	32	C
7	Bridge Street / 5th Street On-Ramp	Yuba City (Exempt)	Side Street Stop	AM	12	B
				PM	19	C
8	5th Street WB Off-Ramp / Sutter Street	Yuba City (Exempt)	Side Street Stop	AM	19	C
				PM	14	B
9	Bridge Street / 2nd Street	Yuba City (D)	Side Street Stop	AM	24	C
				PM	**42**	**E**
10	5th Street / J Street	Marysville (D)	Traffic Signal	AM	25	C
				PM	40	D
11	5th Street / SR 70	Caltrans (E)	Traffic Signal	AM	34	D
				PM	35	C
12	3rd Street / SR 70	Caltrans (E)	Traffic Signal	AM	57	E
				PM	54	D
13	SR 70 SB On-Ramp / F Street	Caltrans (E)	Uncontrolled	AM	5	A
				PM	24	C

Notes: Intersection delay is based on the average intersection control delay for signalized and all-way stop controlled intersections. The worst case movement is reported for side-street stop controlled intersections

Bold text indicates unacceptable operations.

General Plan Policy 5.2-I-12 permits the Yuba City Council to exempt intersections 7 and 8 from a LOS standard because they are associated with the 5th Street Bridge Crossing

Source: Fehr & Peers, Traffic Study 2011

Environmental Consequences

The traffic study assumed an opening year of 2015 and design year of 2035 for the project when modeling future traffic conditions. Based on the projected model, traffic levels on the 5th Street Bridge (average of AM and PM peak hours) are projected to increase by 24% over existing conditions by 2015. Furthermore, if the Build Alternative is selected, and a new four-lane bridge is constructed, traffic levels on the 5th Street Bridge are expected to increase by 40% over existing conditions. These growth rates are explained by the theoretical capacity of a two-lane versus a four-lane bridge. Essentially, as congestion increases traffic will use alternative routes to save time, but with additional capacity and lower levels of service under a four-lane condition, more vehicles will use the facility. These projected traffic growth values on the Bridge Street/5th Street corridor are shown in Table 3.

Average Daily Traffic (ADT) on the 5th Street Bridge is estimated to be 32,800 under existing conditions and is projected to increase to 40,700 in 2015 and 66,500 in 2035 under a No-Build Alternative. The traffic study indicates that six of the thirteen intersections will operate at unacceptable LOS in 2015 (opening year) and ten out of thirteen would operate at unacceptable LOS in 2035 (not including the two exempt intersections) if improvements are not made (Tables 4 and 5).

Table 3: Projected Traffic Growth on Bridge Street/5th Street Corridor

Segment	Bi-Directional Traffic Volume					
	Existing Conditions		Design Year No-Build Alternative		Design Year Build Alternative	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Bridge Street east of SR 99	1,107	1,644	2,630	3,500	2,780 (6%)	3,640 (4%)
Bridge Street east of Shasta Street	1,276	1,775	3,090	3,930	4,320 (40%)	5,470 (39%)
5th Street Bridge	2,221	2,778	4,450	5,660	6,490 (46%)	7,980 (41%)
5th Street west of SR 70	827	1,092	1,940	2,510	3,350 (73%)	3,860 (54%)
3rd Street west of SR 70	1,360	1,627	2,250	2,800	2,670 (19%)	3,360 (20%)
(x%) = Percent Growth Over Design Year No-Build Alternative						

Source: Fehr & Peers, Traffic Study 2011

Build Alternative

The traffic study prepared for this project includes an analysis of traffic conditions in the opening year (2015) as well the design year which is 20 years after opening (2035). The intersection operation results are presented in Tables 4 and 5.

With implementation of the Build Alternative, traffic operations in the project area as well as on the local and regional interstate network would improve. The LOS at the modeled intersections would be generally better in both the opening year and design year compared with the No-Build Alternative. Although, the Build Alternative would double the existing capacity of the bridge, the peak hour congestion related benefits would only be realized for a portion of this additional capacity, since the opening of four lanes would divert traffic away from the SR 20 crossing of the Feather River to the north. The congestion relief benefits are more clearly identified in the opening year, where the Build Alternative would reduce the number of intersections with a failing LOS from six to two.

By the design year, even with the project, most of the modeled facility would be overwhelmed with traffic as Table 5 shows 12 out of 13 intersections operating at a LOS E or F during peak hour. Additional capacity over the Feather River is a goal of the Yuba City and Marysville General Plan Transportation and Circulation Elements, and by 2035, it is possible that additional capacity beyond this project will be added between the two cities. Additionally, as illustrated in Table 5, the average delay would be reduced with the Build Alternative compared with the No-Build Alternative for the majority of intersections.

The Build Alternative would improve facilities for bicycles and pedestrians. The new bridge would have a similar Class I multi-use path; however, roadway work on the adjacent project areas within Yuba City and Marysville would include improvement and addition to the existing sidewalk and bicycle path systems. Additional connections with ADA compliant access will be provided between the Class I trail over the bridge and the existing trails located on and adjacent to the Yuba City levee. Formalized crosswalks will be added as necessary at each of the affected intersections throughout the project, and in general, pedestrian and bicycle safety would be enhanced by the project.

In order to accommodate the additional two lanes of traffic over the Feather River, permanent tie in connections with the bridge would be required for both Yuba City and Marysville sides of the project. At the Marysville side, the additional two lanes will travel underneath the existing railroad overhead bridge which passes over 5th Street just west of J Street, shown in Figure 4.

Table 4: Intersection Operations – Opening Day (2015) Conditions

Intersection		Jurisdiction (Minimum Acceptable LOS)	Control	Peak Hour	No Build Alternative		Build Alternative	
					Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Bridge Street / SR 99	Caltrans (E)	Traffic Signal	AM	42	D	43	D
				PM	74	E	71	E
2	Bridge Street / Gray Avenue	Yuba City (D)	Traffic Signal	AM	28	C	28	C
				PM	41	D	47	D
3	Bridge Street / Clark Avenue	Yuba City (D)	Traffic Signal	AM	43	D	40	D
				PM	**83**	**F**	**102**	**F**
4	Bridge Street / Cooper Avenue	Yuba City (D)	Traffic Signal	AM	35	C	35	C
				PM	**62**	**E**	**74**	**E**
5	Bridge Street / Plumas Street	Yuba City (D)	Traffic Signal	AM	48	D	31	C
				PM	**104**	**F**	37	D
6	Bridge Street / Shasta Street	Yuba City (D)	Traffic Signal	AM	52	D	28	C
				PM	**108**	**F**	40	D
7	Bridge Street / 5th Street On-Ramp	Yuba City (Exempt)	Side Street Stop	AM	13	B	34	D
				PM	45	E	26	D
8	5th Street WB Off-Ramp / Sutter Street	Yuba City (Exempt)	Side Street Stop	AM	37	E	25	C
				PM	23	C	32	C
9	Bridge Street / 2nd Street	Yuba City (D)	Side Street Stop	AM	34	D	36	D
				PM	**54**	**F**	39	D
10	5th Street / J Street	Marysville (D)	Traffic Signal	AM	53	D	23	C
				PM	**123**	**F**	32	C
11	5th Street / SR 70	Caltrans (E)	Traffic Signal	AM	23	C	21	C
				PM	32	C	30	C
12	3rd Street / SR 70	Caltrans (E)	Traffic Signal	AM	38	D	31	C
				PM	64	E	46	D
13	SR 70 SB On-Ramp / F Street	Caltrans (E)	Uncontrolled	AM	6	A	22	C
				PM	6	A	27	D

Notes: Intersection delay is based on the average intersection control delay for signalized and all-way stop controlled intersections. The worst case movement is reported for side-street stop controlled intersections

Bold text indicates unacceptable operations.

General Plan Policy 5.2-I-12 permits the Yuba City Council to exempt intersections 7 and 8 from a LOS standard because they are associated with the 5th Street Bridge Crossing

Source: Fehr & Peers, Traffic Study 2011

Table 5: Intersection Operations – Design Year (2035) Conditions

Intersection		Jurisdiction (Minimum Acceptable LOS)	Control	Peak Hour	No Build Alternative		Build Alternative	
					Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Bridge Street / SR 99	Caltrans (E)	Traffic Signal	AM	63	E	73	E
				PM	**120**	**F**	**130**	**F**
2	Bridge Street / Gray Avenue	Yuba City (D)	Traffic Signal	AM	47	D	31	C
				PM	**122**	**F**	**56**	**E**
3	Bridge Street / Clark Avenue	Yuba City (D)	Traffic Signal	AM	**104**	**F**	47	D
				PM	**204**	**F**	**93**	**F**
4	Bridge Street / Cooper Avenue	Yuba City (D)	Traffic Signal	AM	**152**	**F**	49	D
				PM	**254**	**F**	**68**	**E**
5	Bridge Street / Plumas Street	Yuba City (D)	Traffic Signal	AM	**296**	**F**	**191**	**F**
				PM	**> 300**	**F**	**288**	**F**
6	Bridge Street / Shasta Street	Yuba City (D)	Traffic Signal	AM	**> 300**	**F**	**209**	**F**
				PM	**> 300**	**F**	**> 300**	**F**
7	Bridge Street / 5th Street On-Ramp	Yuba City (Exempt)	Side Street Stop	AM	> 300	F	> 300	F
				PM	> 300	F	> 300	F
8	5th Street WB Off-Ramp / Sutter Street	Yuba City (Exempt)	Side Street Stop	AM	> 300	F	158	F
				PM	185	F	107	F
9	Bridge Street / 2nd Street	Yuba City (D)	Side Street Stop	AM	**> 300**	**F**	**64**	**E**
				PM	**> 300**	**F**	**137**	**F**
10	5th Street / J Street	Marysville (D)	Traffic Signal	AM	**266**	**F**	**79**	**E**
				PM	**273**	**F**	**216**	**F**
11	5th Street / SR 70	Caltrans (E)	Traffic Signal	AM	**103**	**F**	**92**	**F**
				PM	80	E	**119**	**F**
12	3rd Street / SR 70	Caltrans (E)	Traffic Signal	AM	43	D	54	D
				PM	**93**	**F**	58	E
13	SR 70 SB On-Ramp / F Street	Caltrans (E)	Uncontrolled	AM	31	D	23	C
				PM	11	B	10	A

Notes: Intersection delay is based on the average intersection control delay for signalized and all-way stop controlled intersections. The worst case movement is reported for side-street stop controlled intersections

Bold text indicates unacceptable operations.

General Plan Policy 5.2-I-12 permits the Yuba City Council to exempt intersections 7 and 8 from a LOS standard because they are associated with the 5th Street Bridge Crossing

Source: Fehr & Peers, Traffic Study 2011

Figure 4: Existing 5th Street Condition under the Railroad Bridge

This new widened connection with the 5th Street and J Street intersection will require additional features to ensure traffic safety. In order to prevent collision with the existing underpass columns, concrete barriers and crash guards will be implemented on the west side of the railroad bridge for eastbound lanes as they pass under the railroad bridge, depicted in Figure 5. As shown on Attachment K, the concrete barrier and crash guard will extend past the column of Pier 4 to protect on coming westbound traffic, as well. Solid white striping is proposed to prevent last minute lane changes as motorists approach the intersection. However, future measures may include additional flexible delineators to provide additional deterrence. The other legs of the 5th Street and J Street intersection will be improved, widened, or restriped as needed to accommodate the additional improvements and lanes of traffic across the bridge.

On the Yuba City side of the bridge, the proposed project would include removal of the two existing bridges over 2nd Street. These structures include the 5th Street roadway bridge over 2nd Street and the abandoned railroad bridge over 2nd Street. Removal of these bridges would improve sight distance at the adjacent intersections on Sutter Street and 2nd Street north and south of the crossings, respectively. The intersection of Bridge Street and 2nd Street, as well as the intersection with the 5th Street on/off-ramp and Sutter Street will be upgraded to signalized intersections.

Figure 5: Proposed 5th Street Condition under the Railroad Bridge

From Shasta Street to the bridge approach, 5th Street will be widened to allow eastbound traffic direct access to the bridge. The existing eastbound on-ramp will be removed, along with the abandoned RR underpass. Bridge Street, east of Shasta Street, will be accessed by an off-ramp-type connection to avoid a lane conflict with westbound traffic. Vehicles using Bridge Street between Boyd Street and 2nd Street will now need to take an alternative route to go westbound. Access from this area to eastbound 5th Street will use a new redesigned on-ramp, which will allow a longer acceleration and merge length for improved safety.

The Build Alternative is expected to degrade traffic conditions at the Bridge Street/SR 99 intersection during the PM peak hour. The additional delay is due to a 15 percent increase in traffic that will utilize the intersection during the peak hour. In order to reduce this potential traffic impact, the project has been designed to include a right-turn overlap arrow on the westbound Bridge Street approach to SR 99 and modify the traffic signal progression plans to better manage traffic flows. These changes should minimize the potential impacts caused by the project through the design year; however, these identified impacts are likely to be further minimized, in the near term, by upstream bottlenecks which will meter the amount of traffic able to access the intersection during peak hour conditions. These proposed changes will be made prior to completion of construction and are signalization changes only, no ground disturbance or construction is necessary.

During construction of the Build Alternative, accessibility for vehicles, bicycles and pedestrians may be affected. Travel lane and/or sidewalk closures may occur during various phases of construction, resulting in detours and temporary traffic delays associated with the construction period.

No Build Alternative

The traffic operations analyses for the No Build Alternative are presented in Tables 4 and 5 for intersections, and indicate deficiencies under existing and future conditions. Nearly all intersections in and around the project area would operate in worse congestion conditions under the No Build Alternative in 2015 and traffic conditions are expected to continue to worsen through 2035. The No Build would be inconsistent with the General Plans of both Yuba City and Marysville to establish additional transportation capacity over the Feather River.

Under the No Build Alternative, no improvements would be constructed for bicycle and pedestrian facilities. Accessibility and connectivity would remain deficient in the project area. The No Build Alternative would not modify existing traffic patterns for residents and businesses. Under the No Build Alternative, improvements would not be constructed; therefore, construction period effects to the transportation system do not apply to this alternative.

6D. VALUE ANALYSIS

A value analysis (VA) for the project was conducted in March 2011 over a four day period. The VA team was directed to use Option 1 (Build Alternative) as the baseline proposed project and looked at design alternatives that addressed the following functions: 1) Improve Traffic Operations, 2) Increase Capacity and 3) Reduce Maintenance.

Several design alternatives will still be reviewed with bridge type selection. The following recommendation has already been accepted in the design:

V.A. Alternative No. 2: Reduce median width from 6' to 4'.

This concept would reduce overall bridge costs and provides for the design speed consistent with the approach roadways. With reduced shoulder width, it will discourage motorists from speeding. Other benefits include a smaller footprint, less R/W, and less environmental impact. This alternative has a potential cost savings of $1.0 million and a performance increase of 9%.

6E. RIGHT OF WAY ISSUES

The proposed project would have right of way impacts to several adjacent properties. See Attachment G for Right of Way Exhibits of affected properties. Acquisitions will be performed by the City with Caltrans oversight. Acquisitions of temporary construction easements and permanent right of way are necessary for the Build Alternative.

In Yuba City, the project would impact private property, as well as public properties owned by Sutter County, the City of Yuba City, and the Gilsizer County Drainage District. Additionally, existing public utility easements are affected. The private property will require partial property acquisition. As partners in the development of the 5th Street Bridge Replacement Project, Sutter County and Yuba City would cooperate in the reassignment of public properties for the purpose of public roadway right of way.

In Marysville, there are three nonresidential, single business retail establishments that will be impacted by right of way acquisitions of two parcels under the Build Alternative. These acquisitions occur on J Street south of 5th Street. All three of the businesses will require relocation assistance and full acquisitions of the underlying property. Table 6 identifies the parcels impacted by full acquisitions under the Build Alternative.

Table 6: Full Acquisitions

APN	Area Impacted (sf)	Nonresidential Single Business Retail	Estimated Costs (Acquisition & Relocation Assistance)
YUB 010-156-006	10,827	California Check Cashing Store	$600,000
YUB 010-156-005	14,770	7 to 7 Smog and Hague Water	$600,000
Total	**25,597**		**$1,200,000.00**

APN = Assessor's Parcel Number, sf = square feet

Any business that moves from real property, moves personal property from real property as a result of the acquisition of the real property, or is required to relocate as a result of a written notice from a lead agency for a transportation project is eligible for "Relocation Assistance". All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to the displacees in compliance with Title VI and State statute, after eligibility has been determined.

Additionally, the Build Alternative would have impacts to Union Pacific Railroad right of way. See Section 7 for discussion of Union Pacific Railroad Involvement.

Utilities

In Yuba City, potable water and wastewater are managed and operated by the Yuba City Public Works Department, Utilities Division. Yuba City draws water directly from the Feather River. The City of Marysville potable water is managed and provided by the California Water Service Company, Marysville District. The California Water Service Company draws groundwater through eight wells and conveys it to Marysville via pipeline. The City of Marysville Public Services Department manages the wastewater systems within the city.

Pacific Gas and Electric Company (PG&E) provides the area with electric and natural gas services. There are existing electrical lines on power poles in Marysville and Yuba City. Power lines are found at 5th Street in Marysville and at 2nd Street and Bridge Street in Yuba City. There is an electrical line spanning Riverfront Park and Feather River located on poles and towers north of the existing 5th Street Bridge. There is also a cable communication line spanning the river and park on the abandoned Northern Electric Railroad Bridge just south of the 5th Street Bridge. Table 7 outlines a preliminary list of utilities that are expected to be located within the project area.

Table 7: Existing Utility Facilities

Utility Company	Description of Utility Facility	Utility Location
AT&T	Telecommunication	Existing 5th Street Bridge and underground in the roadway approaches
Comcast	Overhead Fiber Optic and other Telecommunication Lines	J Street and 4th Street, crossing over the Feather River on the Railroad Bridge, and continuing onto Bridge Street.
Pacific Gas and Electric	Overhead Electrical Lines and Underground Natural Gas Pipelines	Along 5th Street, crossing the Feather River north of the 5th Street Bridge and continuing on Bridge Street.
California Water Service	Water Main	5th Street and J Street
Levee District One	Underground Unknown Facilities	Within the West Yuba City Levee
Marysville Levee District	Underground Unknown Facilities	Within the East Marysville Levee
City of Yuba City	Sewer Mains and Storm Drains	5th Street and J Street
City of Marysville	Sewer and Water Lines,	Under various roadways

	Storm Drains	throughout the Project Area in Yuba City
Gilsizer Drainage District	Storm Drainage Facilities	Yuba City approach

Build Alternative

AT&T telecommunication lines, and potentially other communication lines using AT&Ts duct banks under lease agreement, are located on the existing 5th Street Bridge and will need to be relocated in a similar duct bank on the new bridge. Comcast fiber optic and telecommunication lines are located on overhead poles which are in conflict with the proposed project and will need to be relocated. PG&E electric lines are located on poles which are in conflict with the project and will need to be relocated. The California Water Service water main located at 5th Street and J Street has above ground appurtenances that will need to be either relocated underground or reconnected above ground during construction. Levee District One and Marysville Levee District have unknown utilities located in the respective levees which may be impacted during construction and may require relocation. The City of Marysville has sewer mains on 5th Street and J Street which may need to be relocated, and the City of Yuba City has sewer and water facilities within the City roadway system that may also require relocation during construction.

Each of these utilities will be located during final project design and full utility coordination, consistent with Caltrans and FHWA requirements, will be performed. All utilities that require relocation during project construction will be moved to another area within the project study area; however, no new environmental impacts of any kind are anticipated as a result of these utility relocations. Any utility relocation required as part of this project has been accounted for in the environmental analysis for the project.

No-Build Alternative

Under the No-Build Alternative, there will be no utility improvements or relocations within the study area.

6F. NOISE ABATEMENT DECISION REPORT

This section represents the Noise Abatement Decision Report (NADR) which:

- Is an evaluation of the reasonableness and feasibility of incorporating noise abatement measures into this project;
- Constitutes the preliminary decision on noise abatement measures incorporated into the Draft Environmental Document (DED); and
- Is required for Caltrans to meet Title 23, Code of Federal Regulation, Part 772 of the Federal Highway Administration standards.

The preliminary Noise Abatement Decision Report (NADR) presents the preliminary noise abatement decision as defined in the Caltrans Traffic Noise Analysis Protocol (Protocol) for the 5th Street Bridge Replacement Project.

The NADR does not present the final decision regarding noise abatement; rather, it presents key information on abatement to be considered throughout the environmental review process, based on the best available information at the time the DED is published.

The preliminary noise abatement decision is based on the feasibility of evaluated abatement and the preliminary reasonableness determination. Noise abatement is considered to be acoustically feasible if it provides noise reduction of at least 5 dBA at receivers subject to noise impacts. Based on the Protocol (May 2011), a base allowance of $55,000 is allotted per benefited residence, to spend on abatement. This reasonable allowance is then compared to the engineer's cost estimate for the abatement. If the engineer's cost estimate is less than the allowance, the preliminary determination is that the abatement is reasonable. If the cost estimate is higher than the allowance, the preliminary determination is that abatement is not reasonable.

Based on the project level Noise Study Report (NSR) (September 2011), only one noise barrier, B1 as shown in Attachment H, is preliminarily considered to be feasible. The noise barrier is 10 feet in height and 170 feet long. The barrier in consideration benefits five residences. Based on the analysis in this report, noise barrier B1 was deemed preliminarily reasonable and is recommended for construction.

Interdisciplinary technical meetings were held to reach the recommendations stated in this document. The barrier that was recommended will be further analyzed within the Environmental Document.

7. OTHER CONSIDERATIONS

7A. STAGE CONSTRUCTION

Construction of the 5th Street Bridge Replacement Project would have temporary impacts on traffic, Feather River fish habitat, and Riverfront Park seasonal activities. To facilitate minimum impacts and maintain general function of the local facilities within the project area, the following Stage Construction is proposed.

Temporary impacts to traffic are unavoidable in the area of the project. However, delays would be minimized by keeping the existing bridge and two lanes of traffic open by use of staged construction. The new 5th Street Bridge over the Feather River and Riverfront Park would be designed with three frames to span the entire 1900 feet from levee to levee. Frames 1 and 2, the west and center portions, would be built to their full width, while Frame 3, the east portion which conflicts with the existing bridge alignment at the Marysville levee, would be staged such that the northern half is built first. The new 2nd Street Overcrossing would also be built in two stages, as it conflicts with the existing 2nd Street Overcrossing. The existing bridge, overcrossing, and approach roadways would remain open to traffic during the first stage of construction. Traffic would then shift to the new structures during the second stage of construction to build the southern half of Frame 3 and the 2nd Street Overcrossing. Adjacent and approach roadways will be staged and/or detoured as necessary to smoothly connect to the new and existing structures.

7B. CONSTRUCTION IMPACTS TO ENVIRONMENTAL RESOURCES

A temporary trestle would be built in order to construct the pier columns in the active channel river bed and support falsework during bridge superstructure construction. Additional areas may be used during construction and dewatering and/or stream diversion may also be required. However, Frame 1 of the 5th Street Bridge, which spans the active channel of the Feather River, would be constructed in one season.

Construction over Riverfront Park would necessitate a temporary closure of a portion of the park in the immediate vicinity of the existing 5th Street Bridge. Construction activities would be contained to an area approximately 150 feet wide along the existing bridge alignment. During construction, all efforts to minimize this temporary impact to the park and its facilities would be taken. Further, no active portion of the park and its facilities will be occupied by construction for more than 6 months. In order to ensure that park activities are not substantially impacted for more than 6 months in any one area, construction staging and construction activities that would impact the recreational use of the park will be done in stages. The exact order of construction would need to be determined by the contractor in coordination with Yuba City.

7C. DRAINAGE

The proposed project drainage and storm event runoff would be handled by directing runoff to existing storm drain systems in both Yuba City and Marysville. Drainage from the 5th Street Bridge would be piped through the interior box girder cells, not removed by scuppers or down-column drains through the deck. Along 5th Street between Shasta Street and the 2nd Street Overcrossing, including the on- and off-ramps, where curb and gutters are not used, natural sheet flow of runoff to the adjacent vegetation will be used. In Marysville, curb and gutter are used on all new roadway segments. Drainage will be directed using gutters, storm drain inlets and pipes to the existing storm drain system.

Gilsizer County Drainage District manages a large drainage basin within the limits of the project area. The basin, on the north side of 5th Street as it approaches Shasta Street in Yuba City, collects storm runoff and other local drainage and transfers it south via an underground culvert to the Gilsizer Slough. Proposed project features, such as widening 5th Street to four lanes and construction of a westbound on-ramp from Sutter Street, would impact the capacity of the Gilsizer basin. During final project design the capacity would be studied and methods to avoid and/or mitigate lost capacity would be evaluated.

7D. UNION PACIFIC RAILROAD INVOLVEMENT

The project would require railroad involvement with Union Pacific Railroad. 5th Street crosses under two UPRR tracks at the 5th Street Underpass. The underpass has a total of 5 openings. Two are for pedestrians and three could be used for vehicular traffic. The travel lanes at the underpass must expand from 2 to 4. See Attachment K for a diagram of the UPRR underpass and associated proposed project features.

An on-site meeting was held on January 13th, 2011 between UPR, City of Yuba City, City of Marysville and the PUC to determine the best solution to expanding the travel lanes. As the existing structure was felt to be in good condition, replacement is

unwarranted. It was determined to utilize the two openings between piers 2, 3 and 4 for eastbound traffic and westbound traffic to use the opening between piers 4 and 5. UPR requested that the piers be protected from vehicle impact.

Additionally, approximately 4100 sf of right-of-way would need to be acquired from UPR to accommodate the free right turn lane the project proposes.

For the project the following items would need to be obtained:

- A PUC GO-88B application would be required to modify the grade separated crossing.
- A "concurrence letter" from UPR would need to be included with the GO-88B application.
- Approval from UPR to perform concrete scanning of the piers and abutments of the underpass and small excavations to identify the width and depth of the pier footings.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

The City of Yuba City Public Works Department and California Department of Transportation, as assigned by the Federal Highway Administration, have prepared an Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, which examines the potential environmental impacts for the proposed project. Yuba City is the California Environmental Quality Act lead agency, while Caltrans is the National Environmental Policy Act lead agency. The document describes why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project and the proposed avoidance, minimization, and/or mitigation measures. The cover page of the Draft Environmental Document is included as Attachment N.

9. PROJECT COST AND FUNDING

A project cost estimate was prepared for the 5th Street Bridge Replacement Project. The estimate for the project, as defined by the description of the Build Alternative, includes the total cost of developing, designing, administration, right of way and construction. Table 8 lists the costs by major expense elements, Engineering and Environmental, Construction Contract and Administration, and Right of Way and Utilities. Construction Administration includes the cost for construction management, engineering support during construction, and local agency administration of the contract. Right of Way and Utilities includes the cost for determining the existing condition and conflicts of the private right of way and utilities with the Build Alternative, coordinating relocation plans with the owners, and performing the relocations.

Table 8 also shows the cost separated by HBP Participating and HBP Non-Participating limits. The federal Highway Bridge Program (HBP) has allocated funds for the Preliminary Engineering (PE), Right of Way (R/W), and Construction (CON) phases of the project. HBP funding is designated for costs associated with design and construction of the 5th Street Bridge and 2nd Street Overcrossing replacements, along with limited lengths of approach work. The 5th Street Bridge and 2nd Street Overcrossing are fully

funded by HBP. The HBP participating limits of construction are depicted in the exhibits of Attachment L.

The complete project extends beyond HBP participating limits in Yuba City and Maryville. Road widening and ramp realignment are necessary in Yuba City to connect the new 4-lane bridge to the existing road network. In Marysville, road widening and intersection modification will complete the connection. Table 8 shows how the costs are divided into the Participating and Non-Participating portions.

Table 8: Project Cost Estimate

Project Element	Cost Estimate	HBP Participating	HBP Non-Participating
Engineering & Environmental	$ 4,259,000	$ 3,651,850	$ 607,150
Construction Contract	$ 58,198,400	$ 47,165,300	$ 11,033,100
Construction Administration	$ 4,683,838	$ 4,131,926	$ 551,912
Right of Way/Utilities	$ 2,355,600	$ 222,500	$ 2,133,100
Totals	**$ 69,496,838**	**$ 55,171,576**	**$ 14,325,262**

The 5th Street Bridge Project has received programmed funding allocations from several sources in addition to HBP. The federal High Priority Projects (HPP) program provided the City with a limited scope demonstration grant, which helped to fund the Project Approval/Environmental Document (PA/ED) phase of project development. Regional Surface Transportation Program (RSTP), allocated by SACOG, will be used to supplement some of the construction costs outside the HBP participation limits. Each funding source requires a match of either 20% or 11.47% to be provided by the recipient(s). Table 9 shows the total programmed amounts and the associated match requirements.

Table 9: Project Programming Status

Funding Source	Funding Amount	Required Match
HBP	$ 54,412,414	$ 7,076,588
RSTP	$ 3,500,000	$ 453,462
HPP Demonstration[1]	$ 3,599,600	$ 899,900

[1] HPP Demonstration funds are designated for PA/ED phase of the project and cannot be used for Construction Contract, Construction Administration, or Right of Way and Utilities costs.

The City is seeking funding for the project features beyond the participating HBP limits. After accounting for the RSTP contribution of $3.5 million, the Non-Participating cost is approximately $10.4 million. In addition, it is seeking assistance with the $6.8 million in matching funds to the overall project, including PE, R/W, and CON. The remaining Non-Participating costs as well as the matching fund requirements are shown in Table 10 as Unfunded Costs.

Table 10: Unfunded Cost Estimate

Funding Type	Unfunded Amount
HBP Match [1]	$ 6,328,180
RSTP Match	$ 453,462
Remaining Non-Participating Cost	$ 10,371,800
Totals	**$ 17,153,442**

[1] HBP Match value is 11.47% of the HBP Participating Cost shown in Table 8.

In March of 1990, a joint resolution was adopted by the Counties of Sutter and Yuba and the Cities of Yuba City and Marysville outlining the maintenance responsibilities of each of the jurisdictions related to the bridge. Under this resolution the four jurisdictions are equally responsible for the cost of major maintenance that may be required. The responsibility for any local funds required to complete the bridge replacement project will also be equally shared by each jurisdiction. Any contributions received to offset the Unfunded Amounts shown in Table 10 will therefore directly benefit these four local agencies.

10. SCHEDULE

Milestones	Delivery Date (Month, Year)
Begin Environmental	January 2011
Circulate DED	July 2013
PA & ED	December 2013
Project PS&E	May 2015
Right of Way Certification	August 2015
Advertise for Bid	August 2015
Begin Construction	May 2016
End Project	January 2018

11. PROJECT PERSONNEL

George Musallam	City of Yuba City, Public Works Director
Kevin Bradford	City of Yuba City, Associate Civil Engineer
David Lamon	City of Marysville, City Services Director
Cara Lambirth	Caltrans, Environmental Coordinator
Michael McCollum	Caltrans, Local Assistance Highway Bridge Program
Matthew Griggs	Dokken Engineering, Consultant Project Manager
Tim Chamberlain	Dokken Engineering, Associate Environmental Planner
Megan Carter	Dokken Engineering, Consultant Associate Engineer
John Gard	Fehr and Peers, Consultant Traffic Engineer
Han-Bin Liang	WRECO, Consultant Water Resources Engineer

ATTACHMENTS

A. LOCATION MAP
B. EXISTING CONDITIONS
C. PROJECT ALTERNATIVES
D. GEOMETRIC CONCEPT DRAWINGS
E. STRUCTURE GENERAL PLANS
F. CORRIDOR SYSTEM EXHIBIT
G. RIGHT OF WAY EXHIBITS
H. NOISE BARRIER EXHIBITS
I. STAGE CONSTRUCTION EXHIBIT
J. CONCEPTUAL DRAINAGE EXHIBIT
K. RAILROAD EXHIBIT
L. HBP FUNDING LIMITS EXHIBITS
M. COST ESTIMATES
N. INITIAL STUDY WITH MND/EA COVER
O. TRAFFIC REPORT COVER
P. HYDRAULIC STUDY COVER

ATTACHMENT A – LOCATION MAP

Source: Digital Globe 2/1/2008; Dokken Engineering 10/22/2010; Created By: A. Scudiere

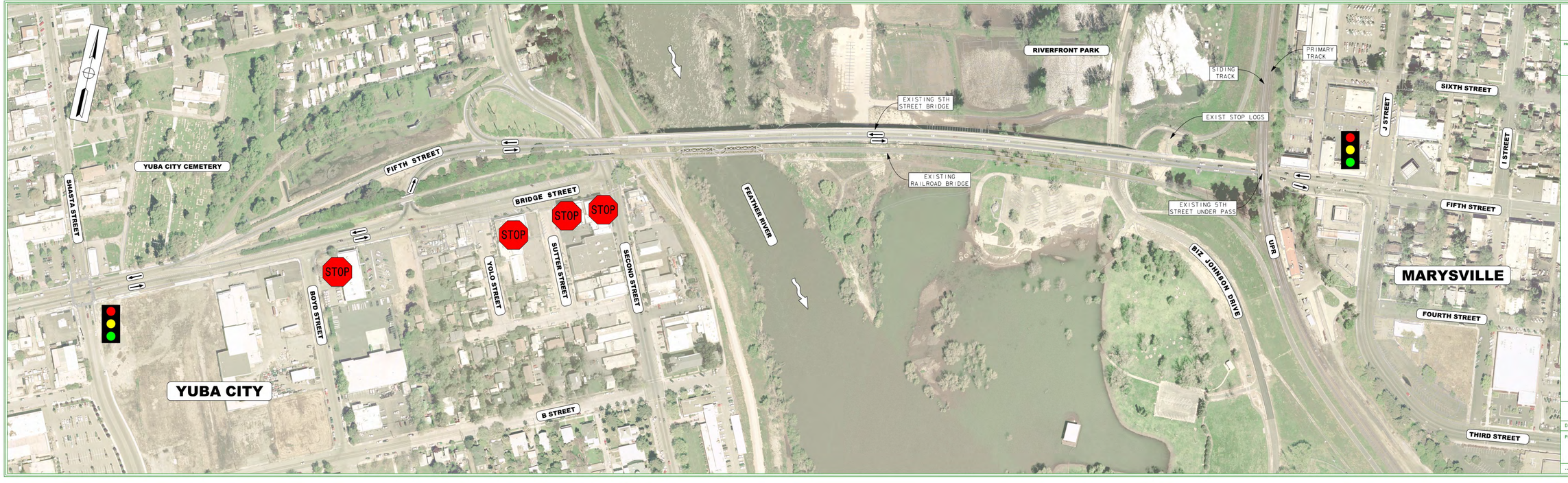
V:\3581_5thStBridge\PESIF1_Vic_10-21-10_as.mxd

0 0.5 Miles

Attachment A
PROJECT VICINITY

Federal Project No. BHLVS-5918(062)
Fifth Street Bridge over theFeather River
City of Yuba City, City of Marysville,
Yuba County, and Sutter County, California

ATTACHMENT B – EXISTING CONDITIONS



EXISTING CONDITIONS EXHIBIT

PROJECT

FIFTH STREET BRIDGE REPLACEMENT

LEGEND

STOP **STOP CONTROL**

TRAFFIC SIGNAL

ATTACHMENT B

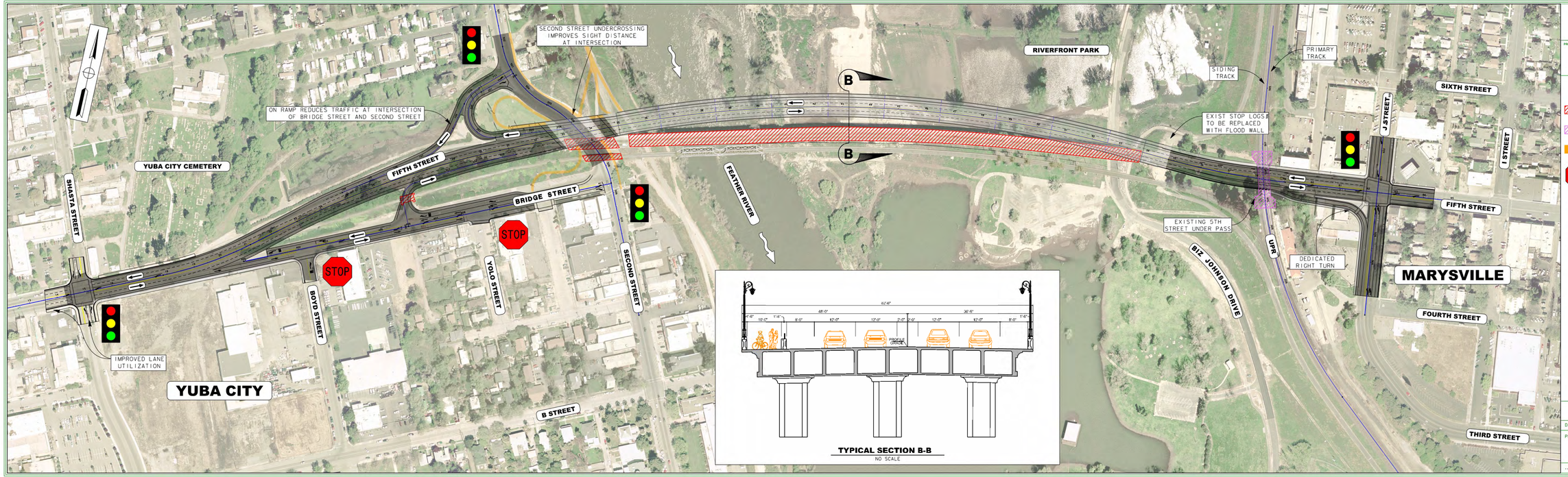
DATE: MARCH 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA 95630
(916) 858-0642

...\BJPSR_PR_Existing Conditions_Exhibit.dgn

ATTACHMENT C – PROJECT ALTERNATIVES



ALTERNATIVE 1
FOUR LANE CROSSING

PROJECT

FIFTH STREET BRIDGE REPLACEMENT NORTH ALIGNMENT

LEGEND

- REMOVE STRUCTURE
- APPROVE NON-STANDARD OPENINGS FOR 4 LANES
- IMPROVED BIKE ACCESS
- STOP CONTROL
- TRAFFIC SIGNAL

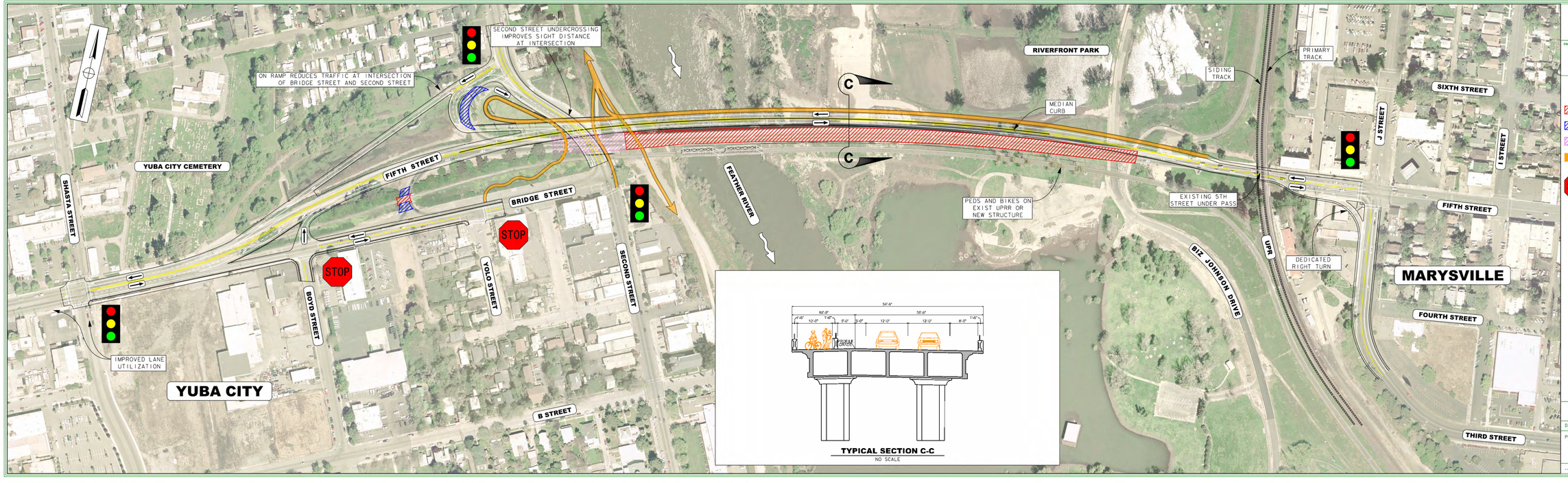
ATTACHMENT C1

DATE: MARCH 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA 95630
(916) 858-0642

...\C1_PSR_PR_Alt1_Alignx_Exhibit.dgn



OPTION 2
TWO LANE CROSSING

PROJECT

FIFTH STREET BRIDGE REPLACEMENT NORTH ALIGNMENT

LEGEND

- REMOVE STRUCTURE
- REMOVE ROADWAY
- REPLACE STRUCTURE
- IMPROVED BIKE ACCESS
- STOP CONTROL
- TRAFFIC SIGNAL

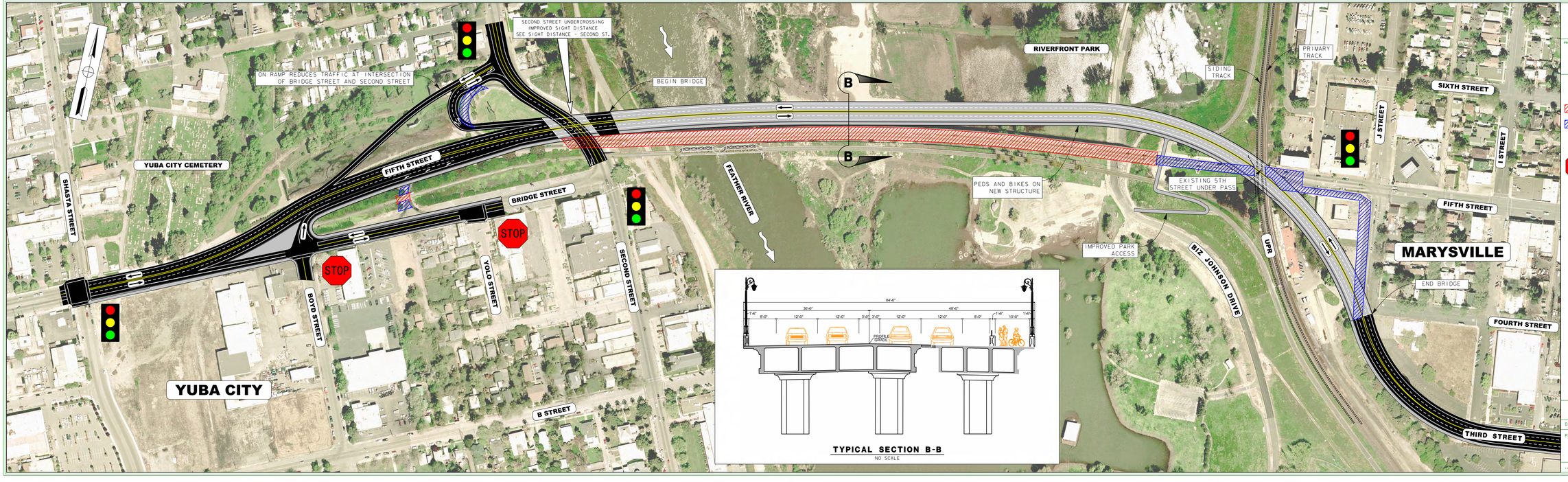
ATTACHMENT C2

DATE: MARCH 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA 95630
(916) 858-0642

...\C2_PSR_PR_Align_Exhibit_Option 2.dgn



OPTION 3
FOUR LANE CROSSING

PROJECT

FIFTH STREET BRIDGE REPLACEMENT WITH FLY OVER ALIGNMENT

LEGEND

- REMOVE STRUCTURE
- REMOVE ROADWAY
- REVISE CIRCULATION
- STOP CONTROL
- TRAFFIC SIGNAL

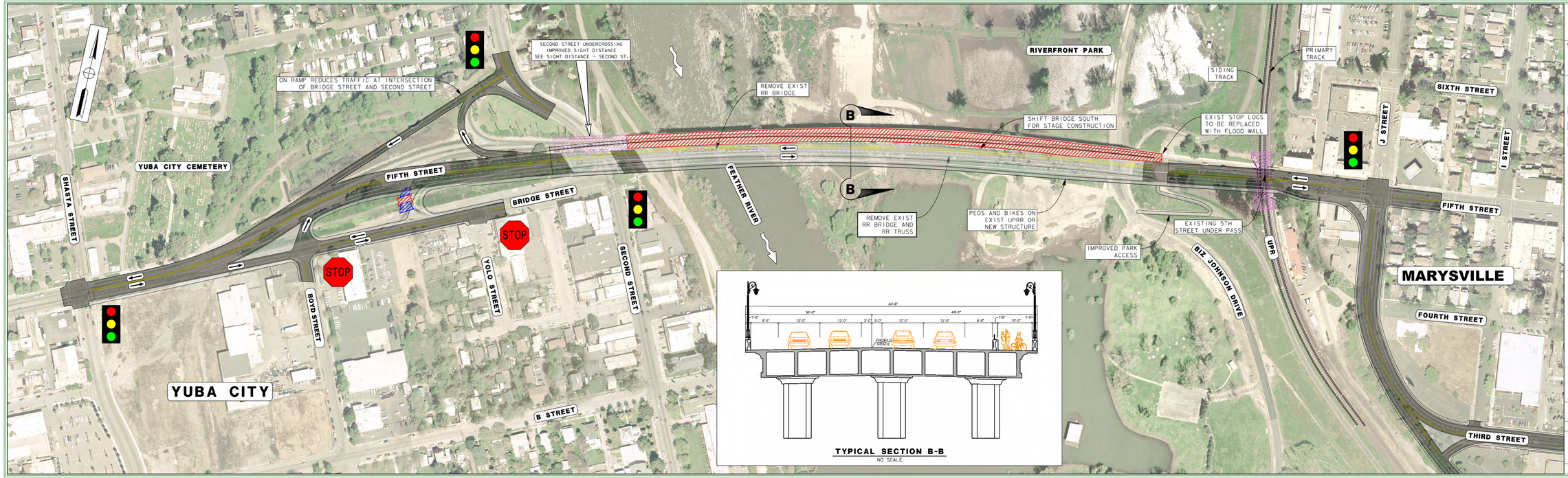
ATTACHMENT C3

DATE: MARCH 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA 95630
(916) 858-0642

...\C3_PSR_PRAlign_Exhibit_Option 3.dgn



SOUTH ALIGNMENT FOUR LANE STRUCTURE

PROJECT

FIFTH STREET BRIDGE REPLACEMENT SOUTH ALIGNMENT

LEGEND

- REMOVE STRUCTURE
- REMOVE ROADWAY
- REPLACE STRUCTURE OR APPROVE NON-STANDARD OPENINGS FOR 4 LANES
- STOP CONTROL
- TRAFFIC SIGNAL

ATTACHMENT C4

DATE: FEBRUARY 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 110
Folsom, CA 95630
(916) 858-0642

...\C4_PSR_PRelign_Exhibit_South.dgn

ATTACHMENT D – GEOMETRIC CONCEPT DRAWINGS

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=180'
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

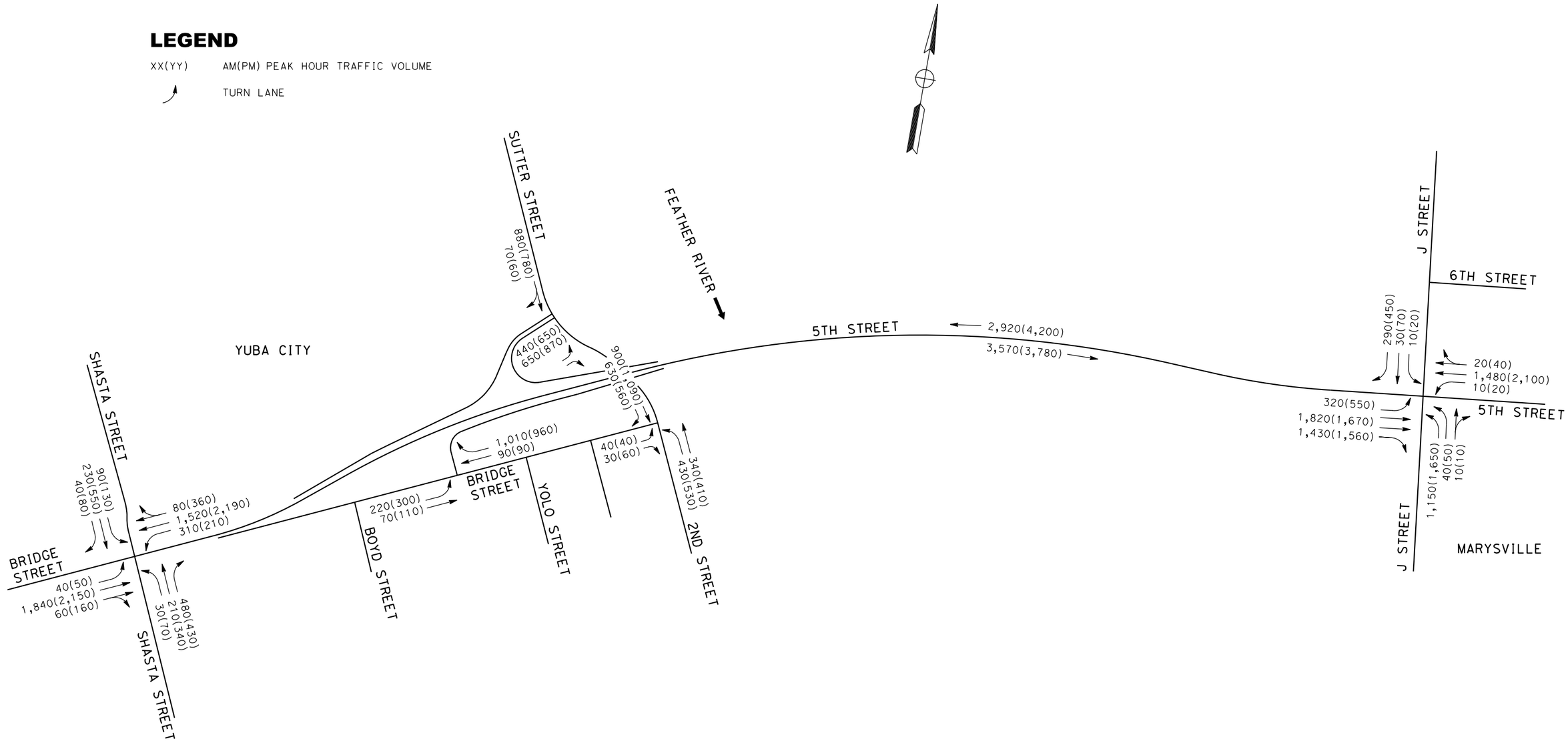
TRAFFIC VOLUME

SHEET NO.
OF

LEGEND

XX(YY) AM(PM) PEAK HOUR TRAFFIC VOLUME

TURN LANE



TRAFFIC FLOW DIAGRAM

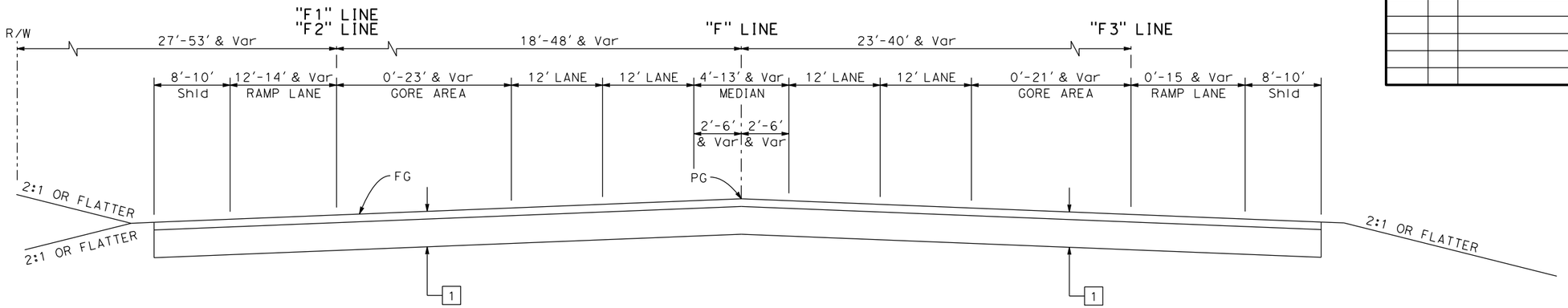
DESIGN YEAR 2035
FINAL TRAFFIC OPERATIONS REPORT
SEPTEMBER 2011
NO SCALE

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

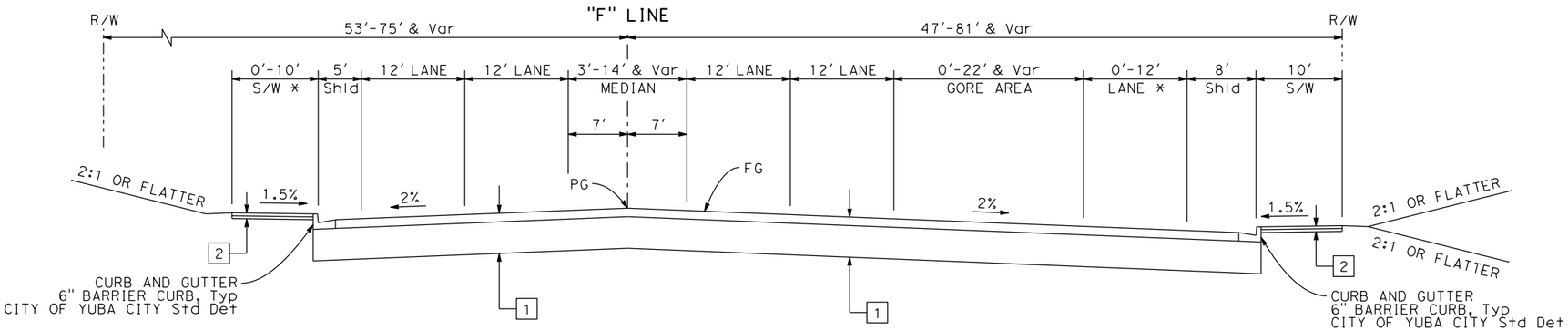
...\5111\1858_TRAFFIC.dgn
3/8/2013

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

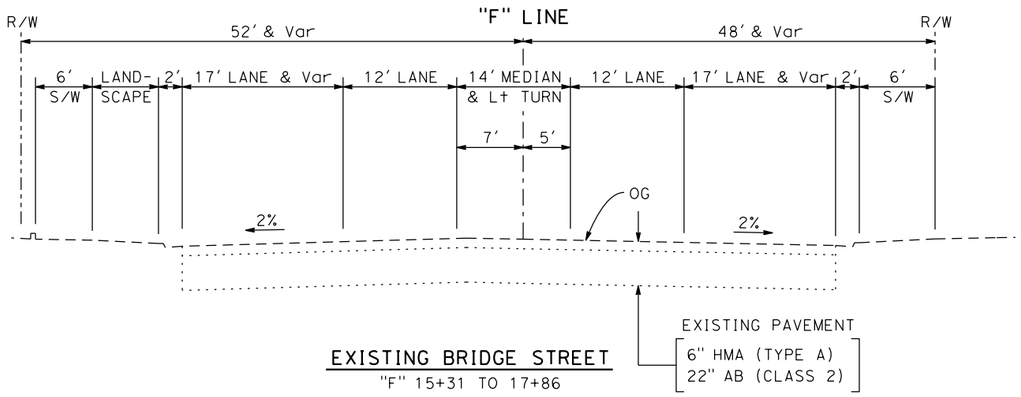
REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



5TH STREET
"F" 20+76 TO 32+65 (BB)



5TH STREET
"F" 17+86 TO 20+76



EXISTING BRIDGE STREET
"F" 15+31 TO 17+86

LEGEND:

- - - - EXISTING CONDITIONS

———— R/W

PAVEMENT SECTIONS:

1 = [6" HMA (TYPE A) / 22" AB (CLASS 2)]

2 = [4" PCC SIDEWALK / 4" AB (CLASS 2)]

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

X-1

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

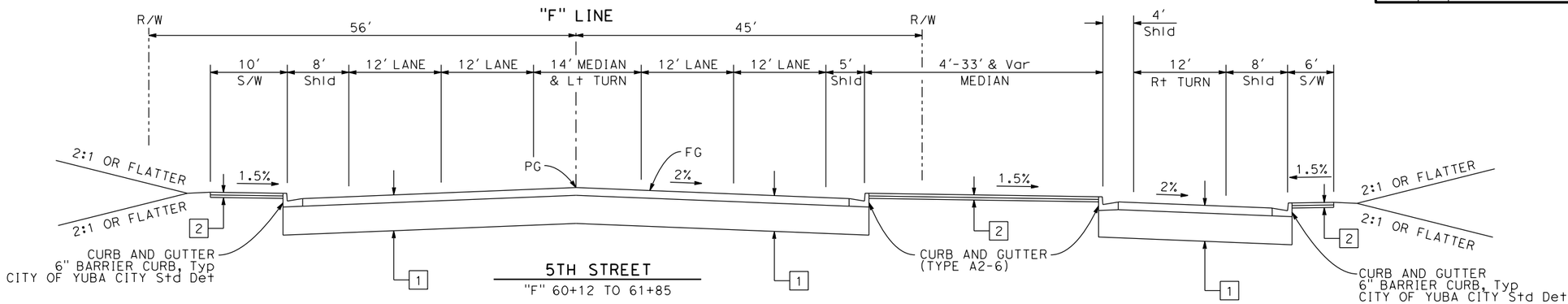
SHEET NO.
OF

3/8/2013

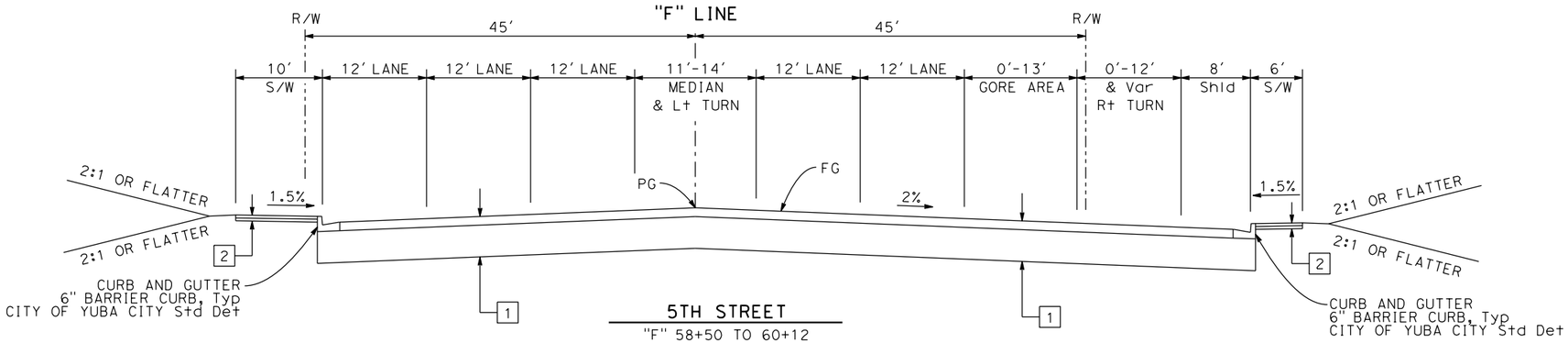
...\51\1858_ca01.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

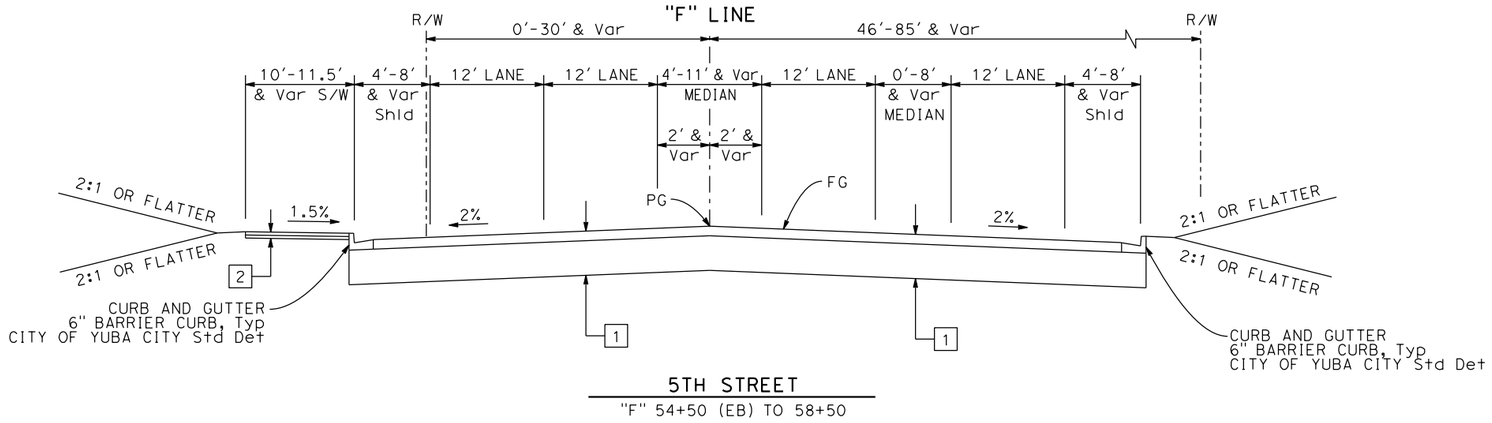
REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



5TH STREET
"F" 60+12 TO 61+85



5TH STREET
"F" 58+50 TO 60+12



5TH STREET
"F" 54+50 (EB) TO 58+50

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

X-2

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

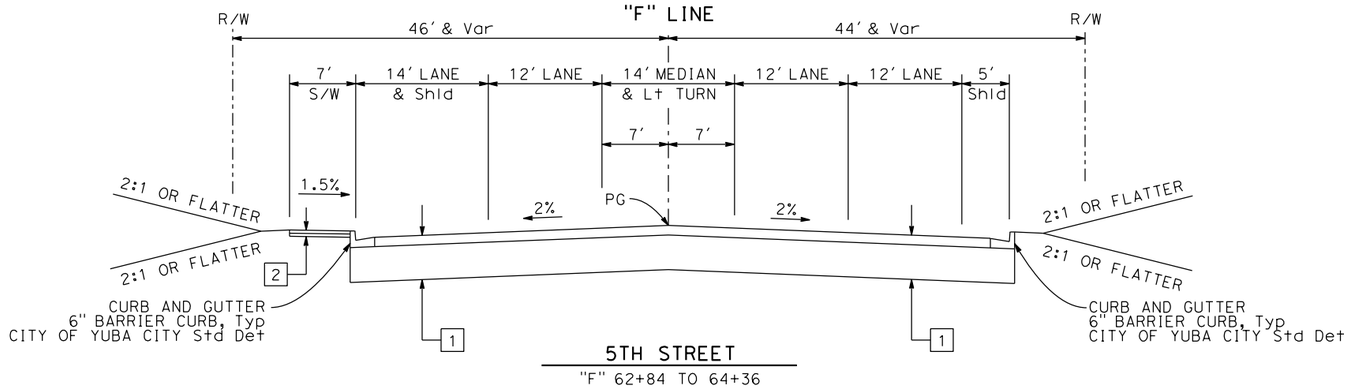
SHEET NO.
OF

3/8/2013

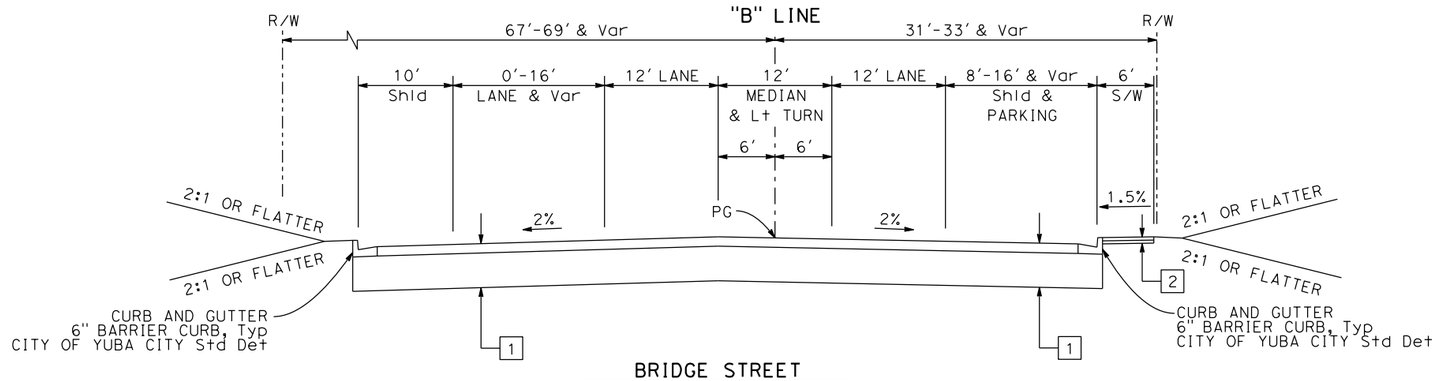
...\5111858_ca02.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

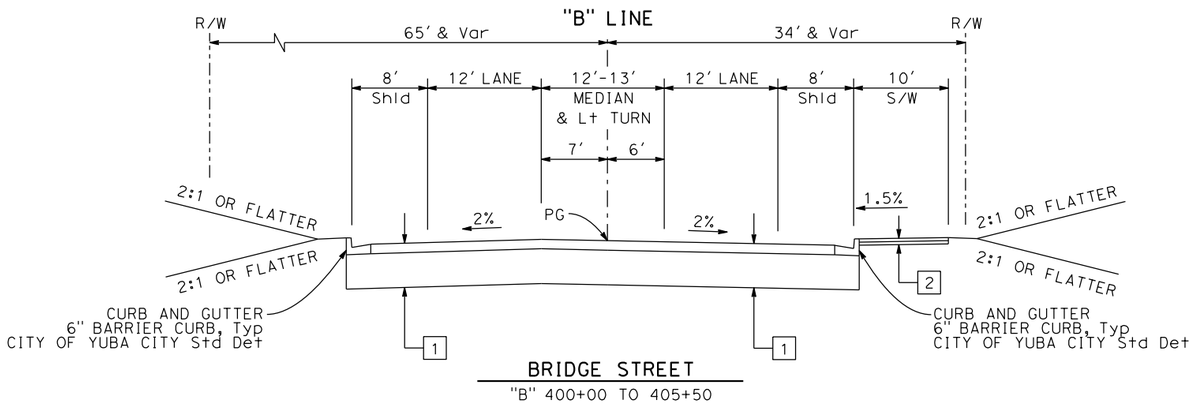
REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



5TH STREET
"F" 62+84 TO 64+36



BRIDGE STREET
"B" 406+44 TO 413+09



BRIDGE STREET
"B" 400+00 TO 405+50

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

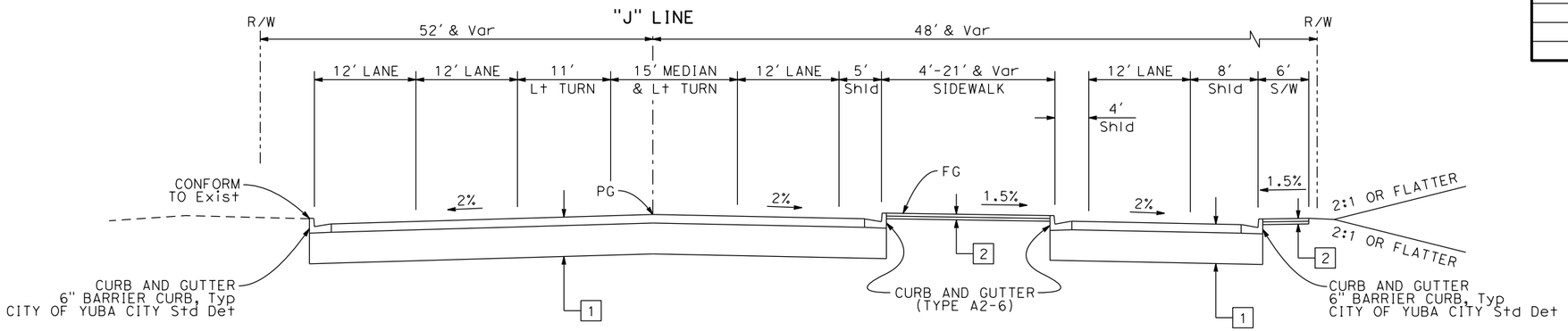
SHEET NO.
OF

X-3

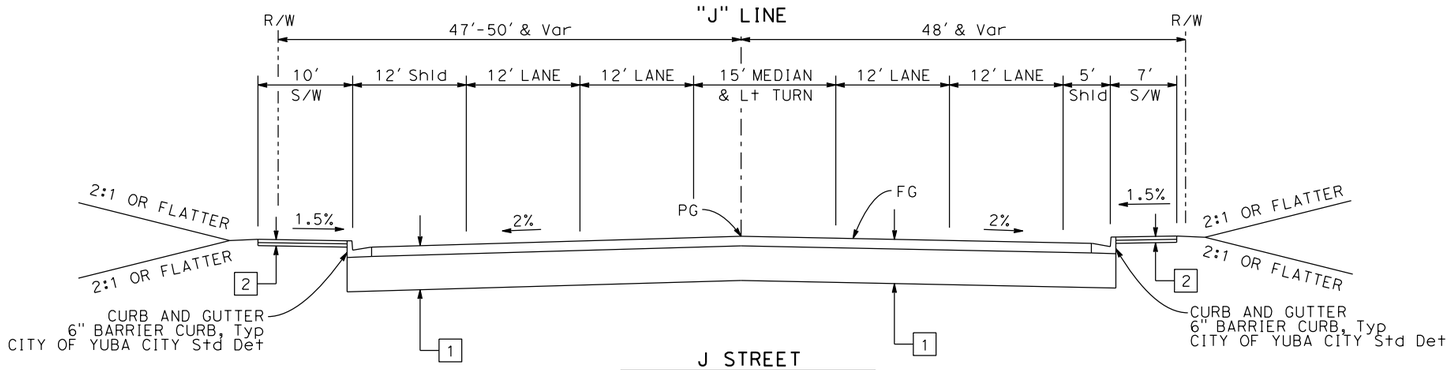
...\511\1858_co03.dgn
3/8/2013

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

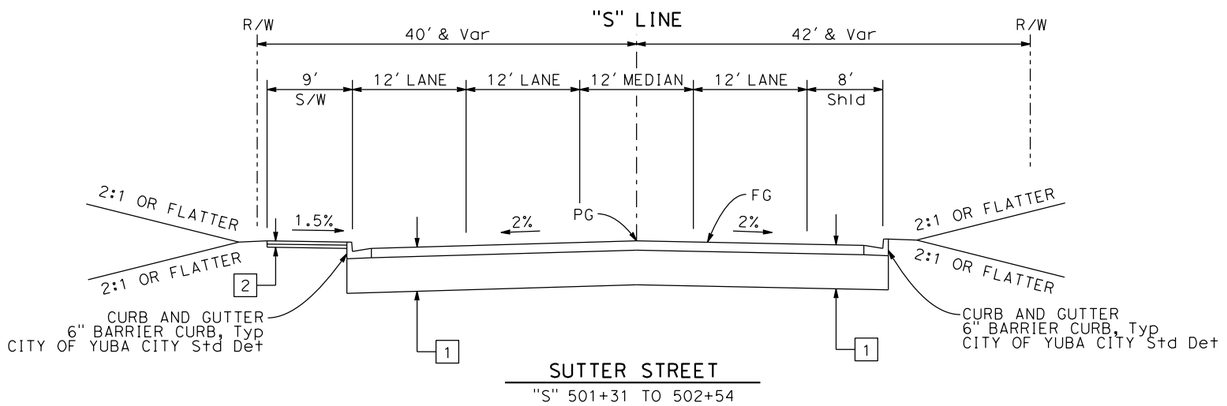
REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



J STREET
"J" 603+96 TO 607+22



J STREET
"J" 601+51 TO 603+07



SUTTER STREET
"S" 501+31 TO 502+54

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

SHEET NO.
OF

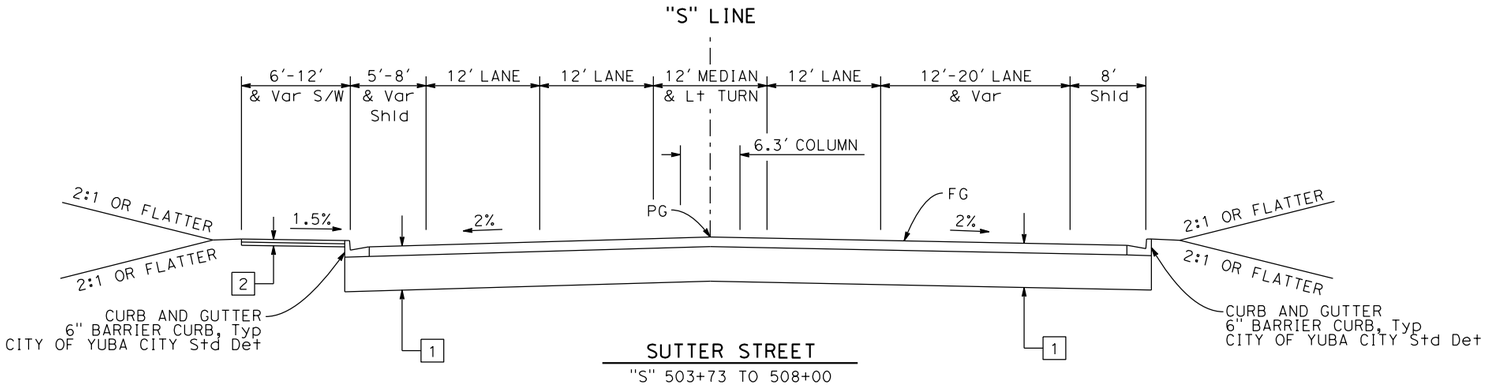
X-4

3/8/2013

...\511\1858_ca04.dgn

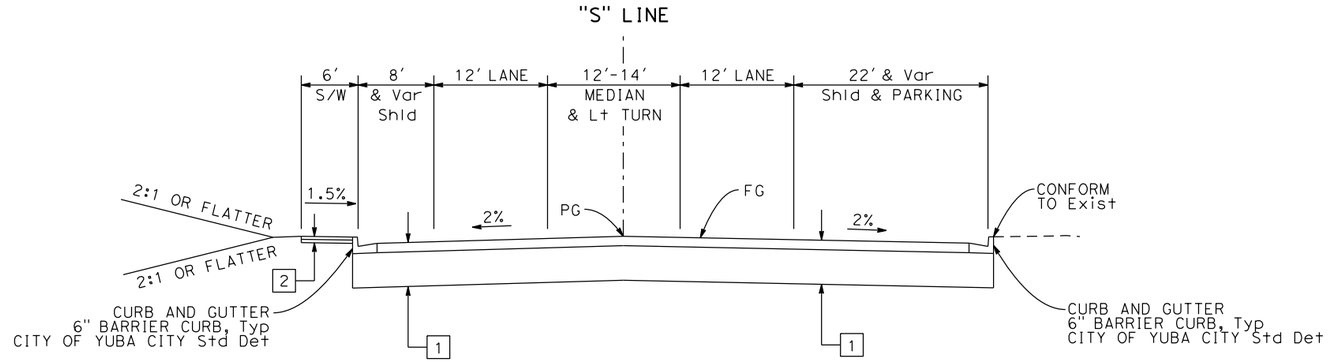
REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



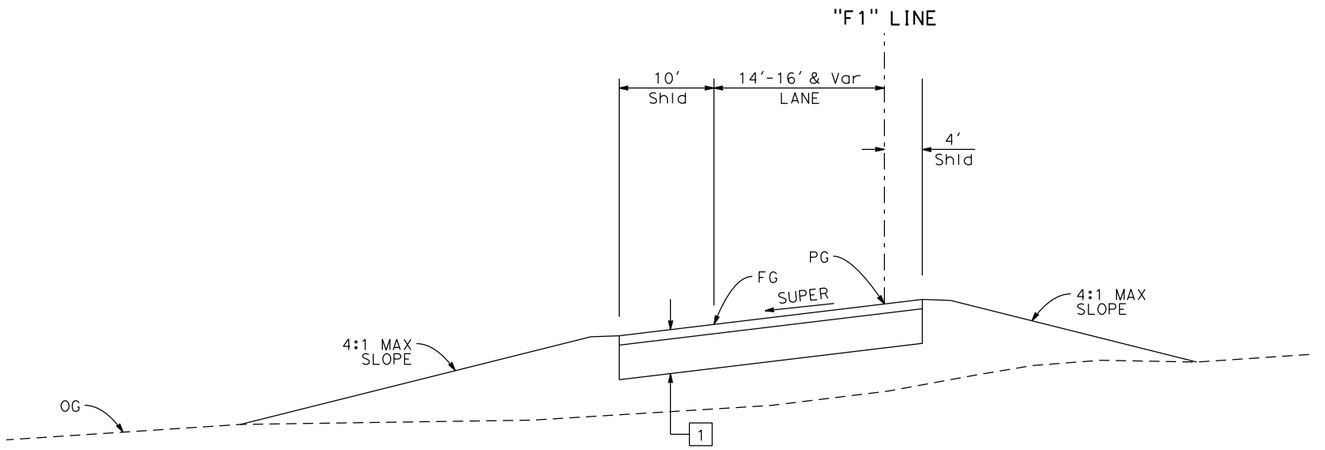
SUTTER STREET

"S" 503+73 TO 508+00



2ND STREET

"S" 508+94 TO 512+74



"F1" ON RAMP

"F1" 103+92 TO 109+11

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

SHEET NO.
OF

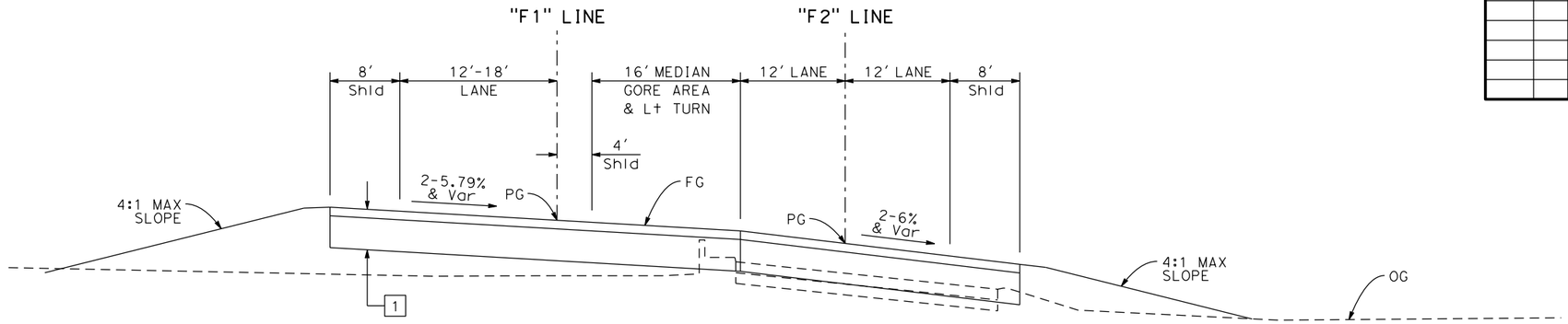
X-5

3/8/2013

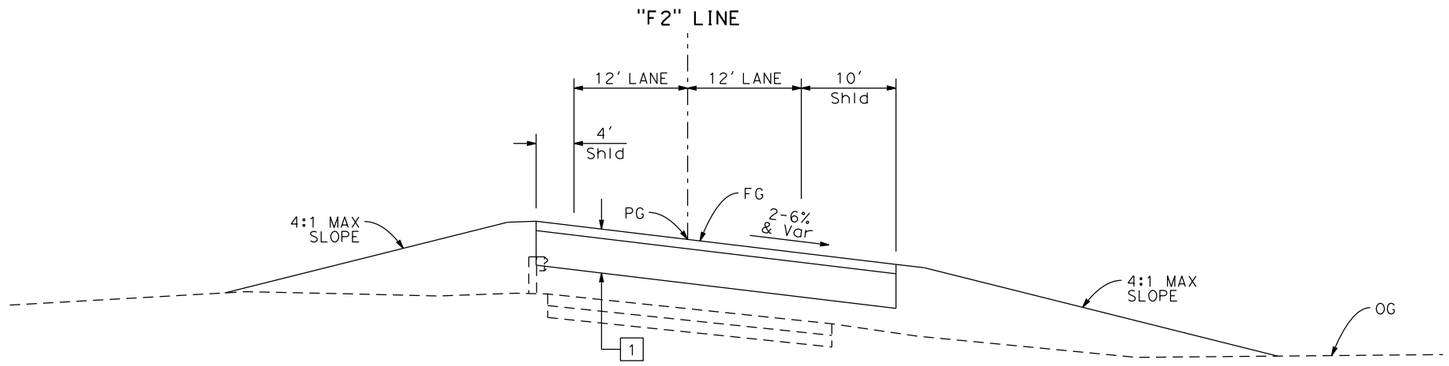
...\511\1858_ca05.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

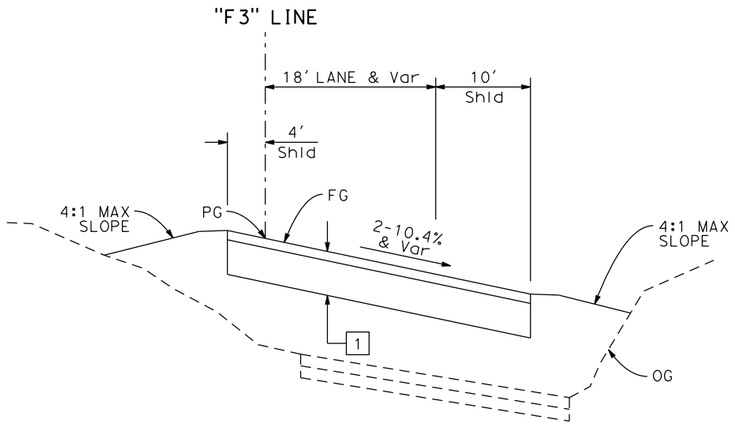
REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



"F1" & "F2" RAMPS
"F1" 109+11 TO 111+62
"F2" 200+00 TO 202+36



"F2" OFF RAMP
"F2" 202+36 TO 206+42



"F3" OFF RAMP
"F3" 300+00 TO 305+51

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE:
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

TYPICAL SECTION

SHEET NO.
OF

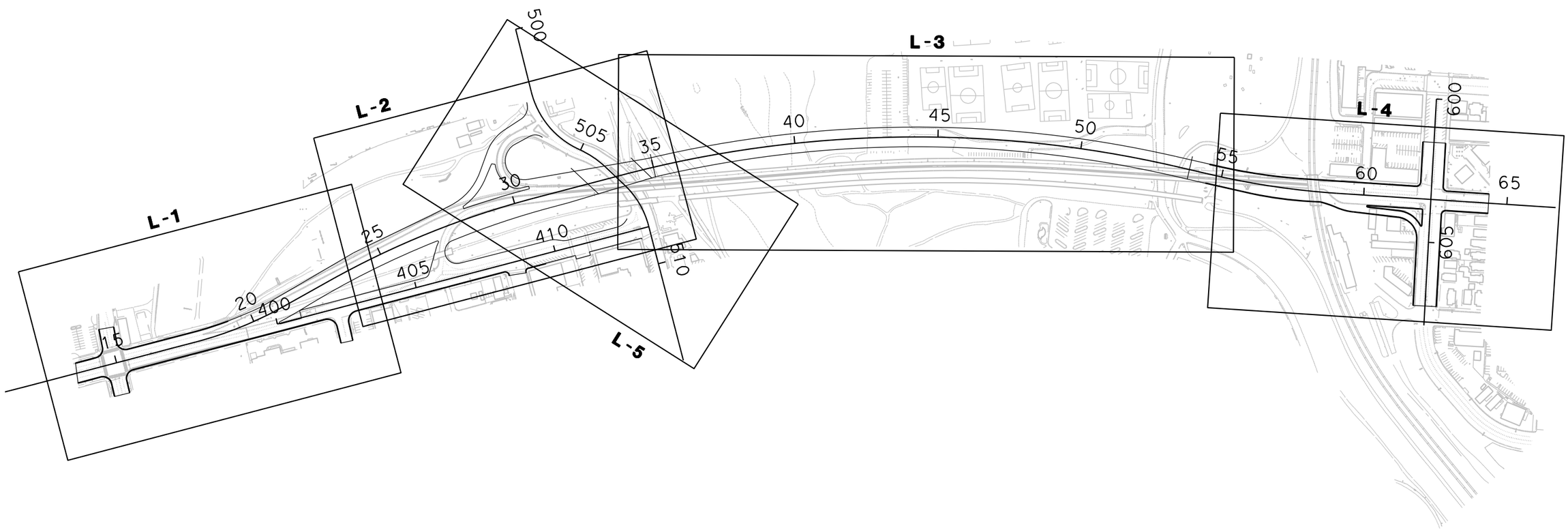
X-6

3/8/2013

...\511\1858_ca06.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
NATHAN J. DONNELLY
No. 64459
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA



PLAN SCALE: 1"=180'
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 985-1845

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

KEY MAP

SHEET NO.
OF

K-1

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

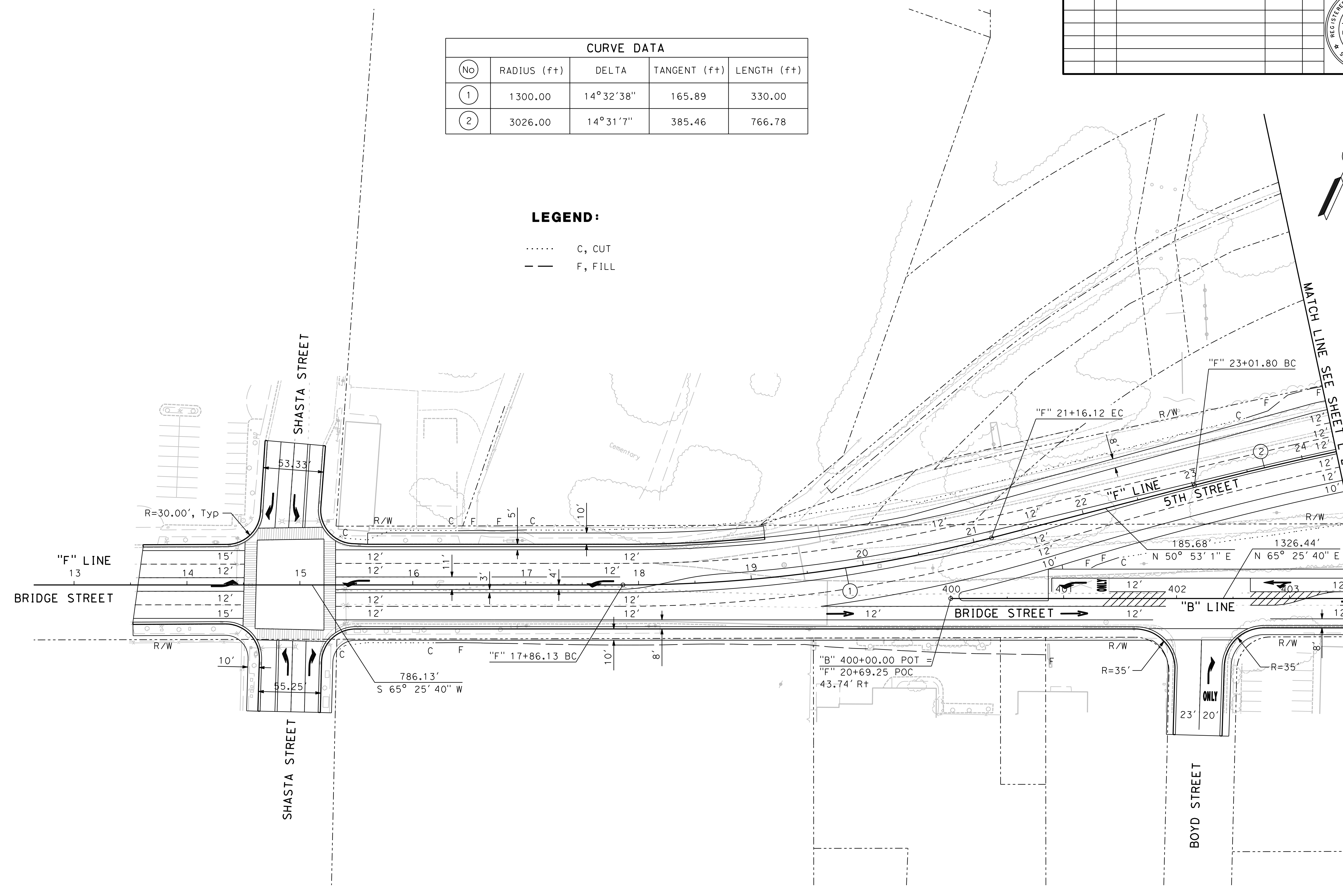
...\511\1858_da01.dgn
3/8/2013

CURVE DATA				
No	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
1	1300.00	14°32′38"	165.89	330.00
2	3026.00	14°31′7"	385.46	766.78

LEGEND:

······ C, CUT

— — F, FILL



FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40′
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT
LAYOUT PLAN

SHEET NO.
1
OF

L-1

3/8/2013

...\511\1858_ea01.dgn

CURVE DATA				
No	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
2	3026.00	14°31′7"	385.46	766.78
3	4026.00	27°34′39"	988.04	1937.79
4	227.00	41°31′11"	86.05	164.50
5	130.00	34°26′39"	40.30	78.15
6	86.00	159°33′26"	476.94	239.49
7	62.00	82°48′44"	54.67	89.61
8	3000.00	7°9′45"	187.76	375.03

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: ____ DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

LAYOUT PLAN

SHEET NO.
2
OF

"F1" 111+62.19 POT=
"S" 503+13.11 POC

SUTTER STREET

131.00′
N 47° 23′ 6" E
131.30′
S 47° 23′ 11" W

"F1" 110+31.18 EC

"F1" 109+53.03 BC

96.33′
S 12° 56′ 32" W

"F1" 108+56.70 EC

"F1" 106+92.21 BC

"F2" 200+00.00 POT=
"S" 503+29.11 POC

R=50′

"S" LINE

"F2" 201+31.30 BC

"F2" 203+70.79 EC

"F2" 206+41.77 POT
"F" 33+33.16 POT
26.00′

"F" 33+89.87 BC

"F2" LINE

204 WB OFF-RAMP 205
270.98′ S 70° 16′ 16" W

300.00′
S 54° 27′ 42" W

"F1" 103+92.21 POT
"F" 24+90.78 POC
26.00′

"F1" LINE

WB ON-RAMP

"F" LINE

5TH STREET

"F3" LINE EB ON-RAMP

"F3" 301+75.80 PCC

"F" 30+68.58 EC

"F3" 305+50.83 POC
"F" 31+22.45 POT
26.00′

321.29′ N 65° 24′ 8" E

2nd STREET

86.19′
N 24° 34′ 20" W

"F3" 300+86.19 BC

ONLY

"B" LINE

BRIDGE STREET

1326.44′ S 65° 25′ 40" W

"B" 413+37.70 POT
"S" 508+66.81 POT

R=12.5′

"B" 406+00.00 POT=
"F3" 300+00.00 POT

MATCH LINE SEE SHEET L-1

MATCH LINE SEE SHEET L-3

NOTE:

1. FOR SECOND STREET AND SUTTER STREET INFORMATION, SEE SHEET L-5.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

L-2

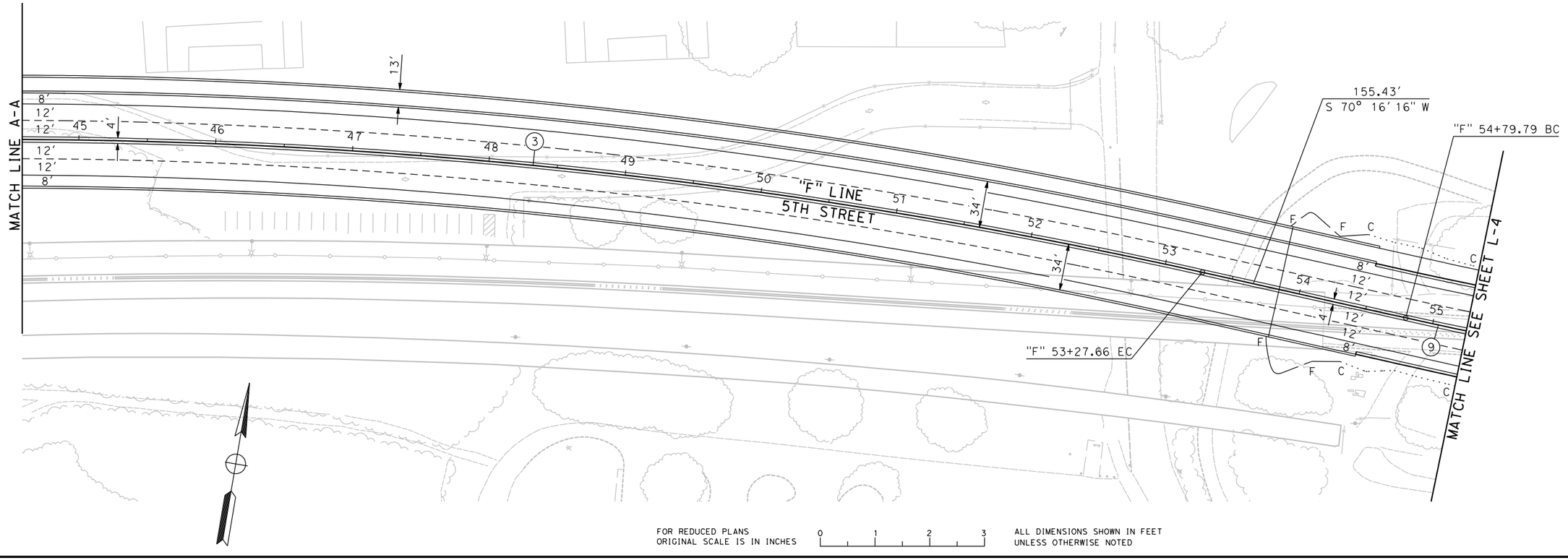
3/8/2013

...\511\1858_ea02.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

CURVE DATA				
No	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
3	4026.00	27°34'39"	988.04	1937.79
9	2673.64	9°6'1"	212.78	424.66



FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

LAYOUT PLAN

SHEET NO.
3
OF

L-3

3/8/2013

...\511\1858_ea03.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ:
VERT:

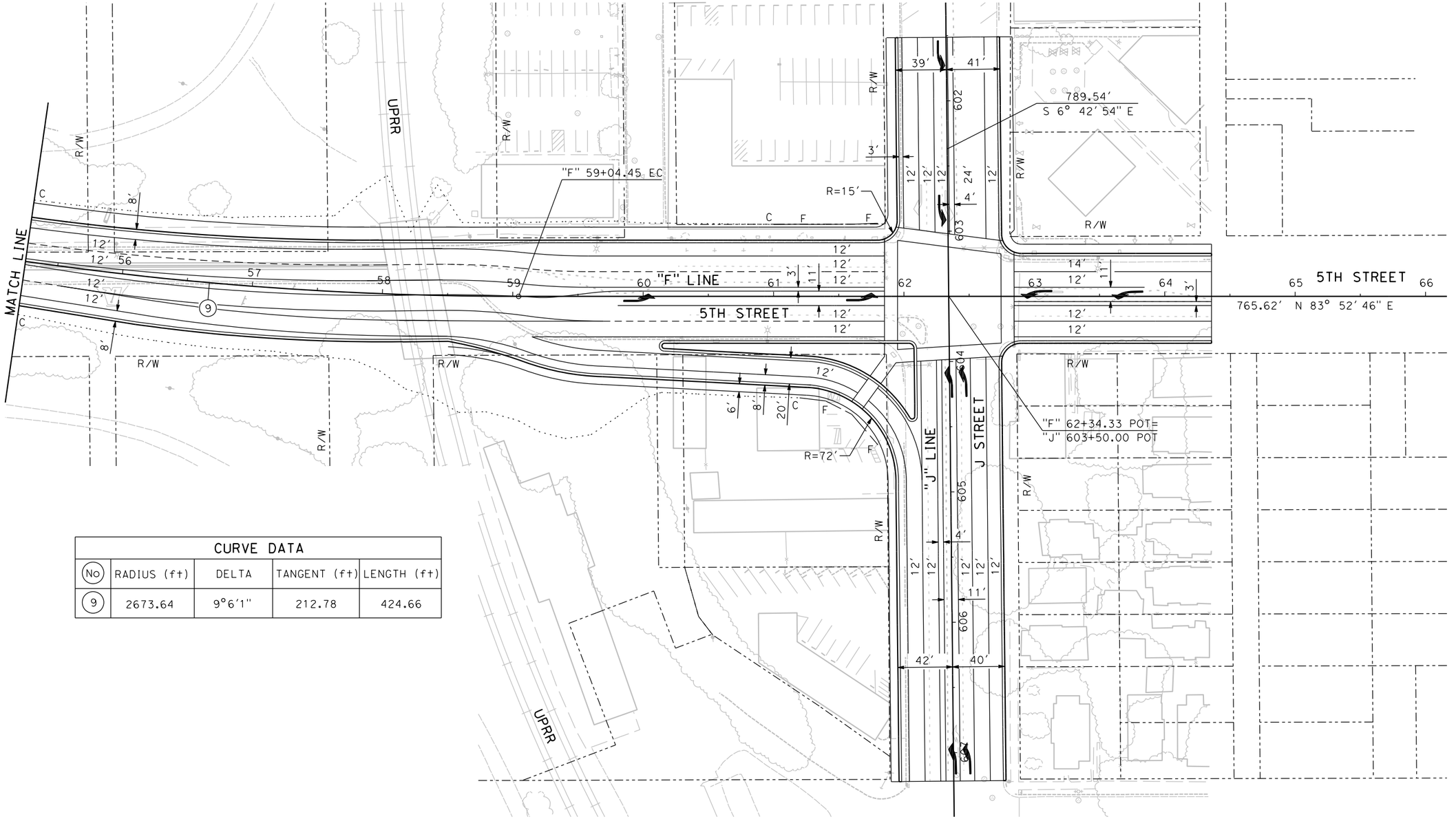
CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 985-1845

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT
LAYOUT PLAN

SHEET NO.
4
OF



CURVE DATA				
(No)	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
(9)	2673.64	9°6'1"	212.78	424.66

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

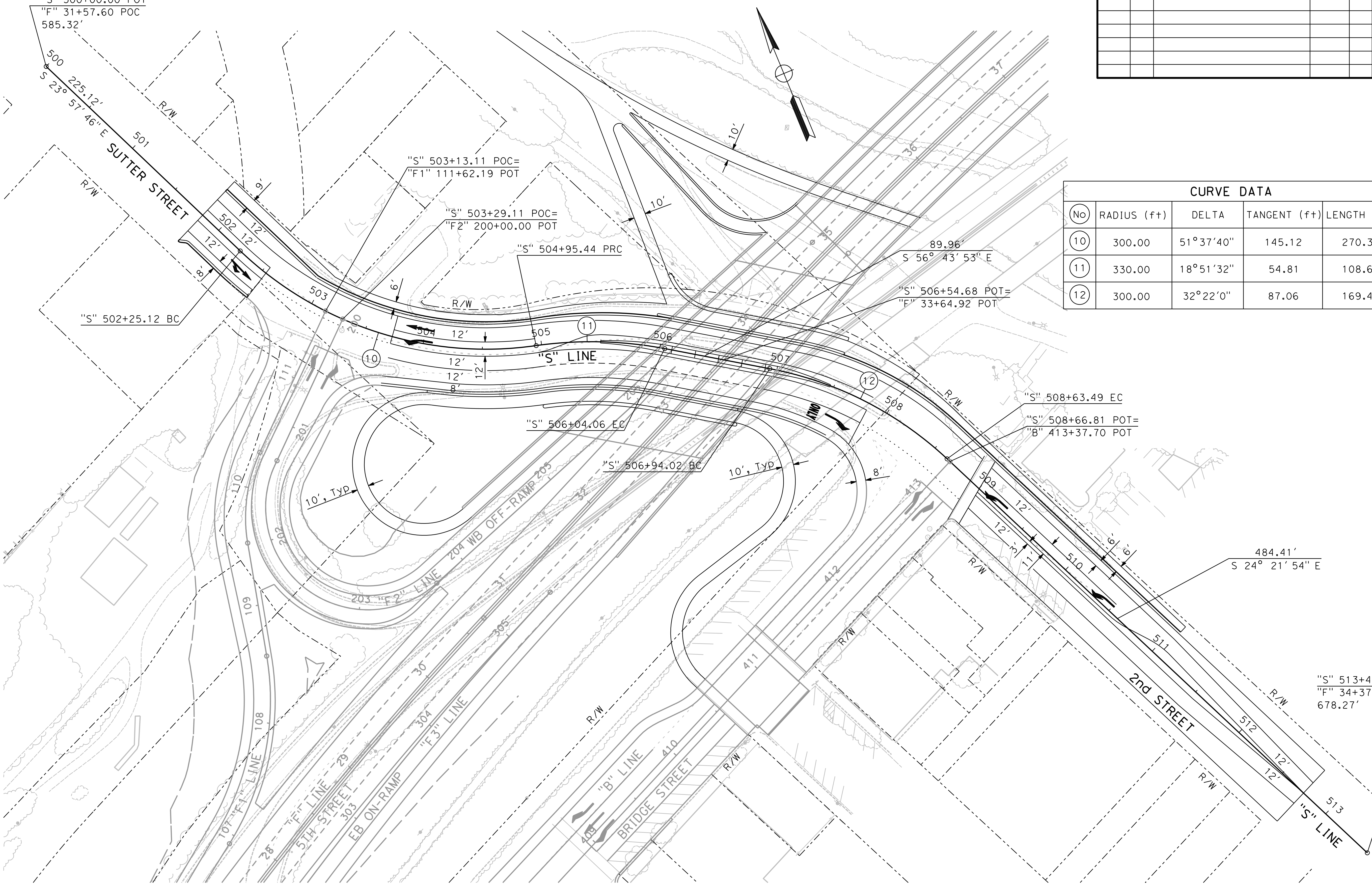
L-4

3/8/2013

...\511\1858_ea04.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA



CURVE DATA				
No	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
10	300.00	51°37'40"	145.12	270.32
11	330.00	18°51'32"	54.81	108.62
12	300.00	32°22'0"	87.06	169.47

3/8/2013

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FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

L-5

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ:
VERT:

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGGS
RECORD DRAWING:
DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT
LAYOUT PLAN

SHEET NO.
5
OF

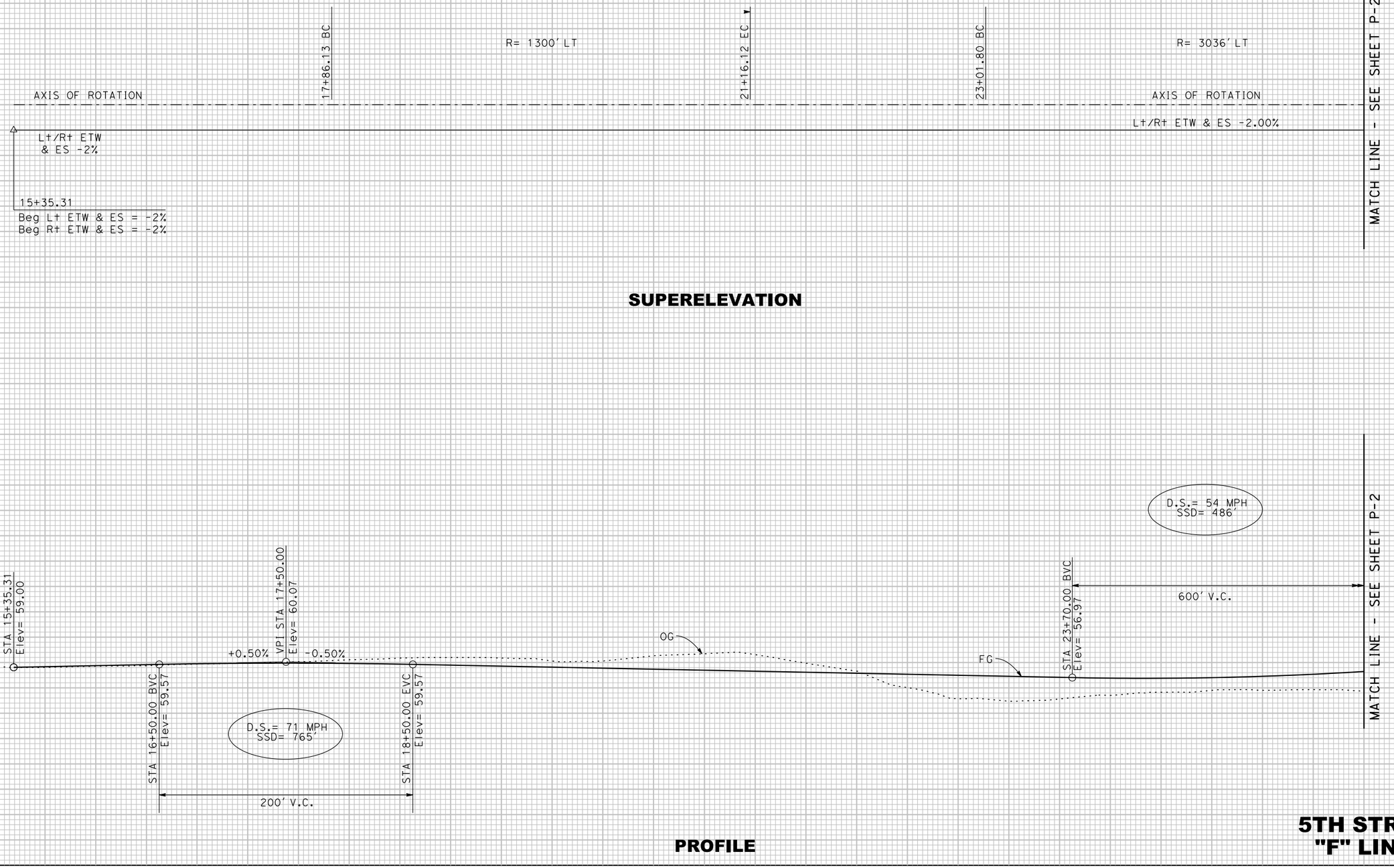
REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

LEGEND:

D.S. DESIGN SPEED

SSD STOPPING SIGHT DISTANCE



SUPERELEVATION

PROFILE

5TH STREET "F" LINE

P-1

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ. 1"=40'
VERT: 1"=4'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.

OF

5/23/2013

...\51\1858_fa01.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

MATCH LINE - SEE SHEET P-1

R= 3036' LT

30+68.58 EC

AXIS OF ROTATION

L+/R+ ETW & ES -2%

33+89.87 BC

R= 4026' RT

MATCH LINE - SEE SHEET P-3

SUPERELEVATION

D.S.= 48 MPH
SSD= 402'

D.S.= 54 MPH
SSD= 486'

600' V.C.

STA 29+70.00 EVC
Elev= 70.00

FG

OG

STA 31+75.00 BVC
Elev= 79.93

℄
SECOND ST.
STA 506+54.68

650' V.C.

VPI STA 35+00.00
Elev= 95.67

+4.84%

+0.50%

-0.50%

VPI STA 26+70.00
Elev= 55.47

+4.84%

MATCH LINE - SEE SHEET P-1

MATCH LINE - SEE SHEET P-3

5TH STREET "F" LINE

PROFILE

26+00 28+00 30+00 32+00 34+00 36+00

110 105 100 95 90 85 80 75 70 65 60 55 50

4% 2% 0% 2% 4%

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

P-2

5/23/2013

...\5111\1858_fa02.dgn

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REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

MATCH LINE - SEE SHEET P-2

MATCH LINE - SEE SHEET P-4

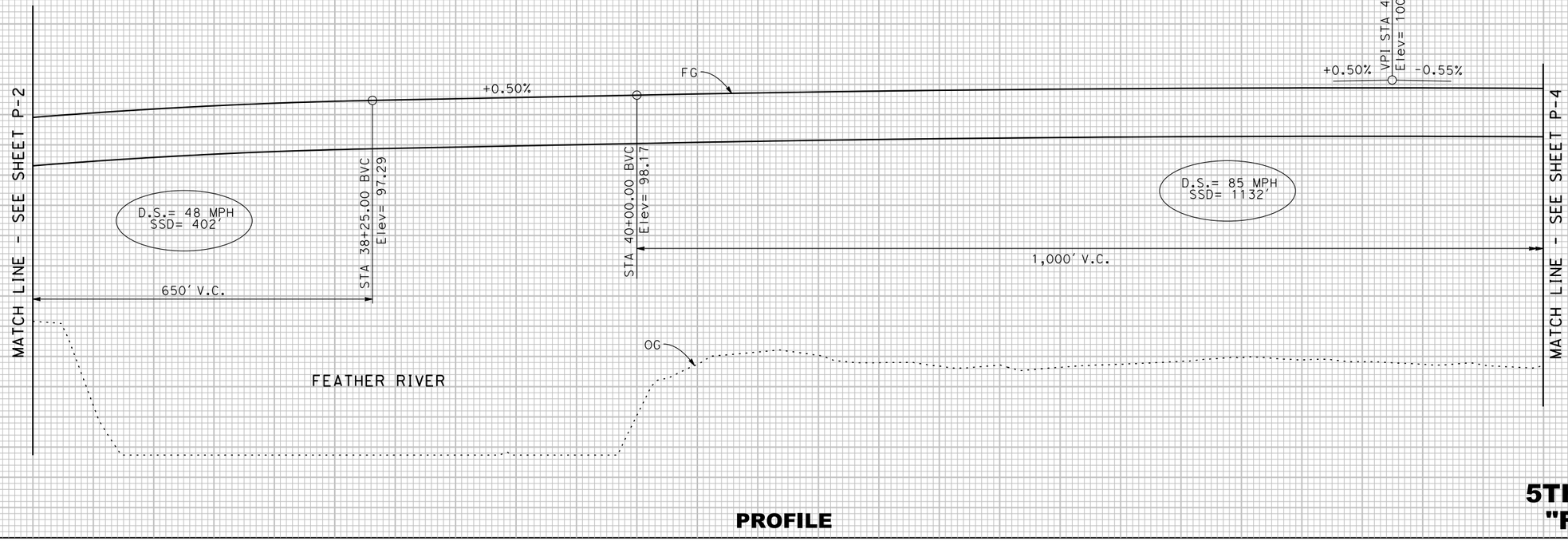
R= 4026' RT

AXIS OF ROTATION

L+/R+ ETW & ES -2%

4% 2% 0% 2% 4%

SUPERELEVATION



PROFILE

5TH STREET "F" LINE

P-3

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

5/23/2013

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REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

MATCH LINE - SEE SHEET P-3

R= 4026' RT

AXIS OF ROTATION

53+27.66 EC

54+79.79 BC

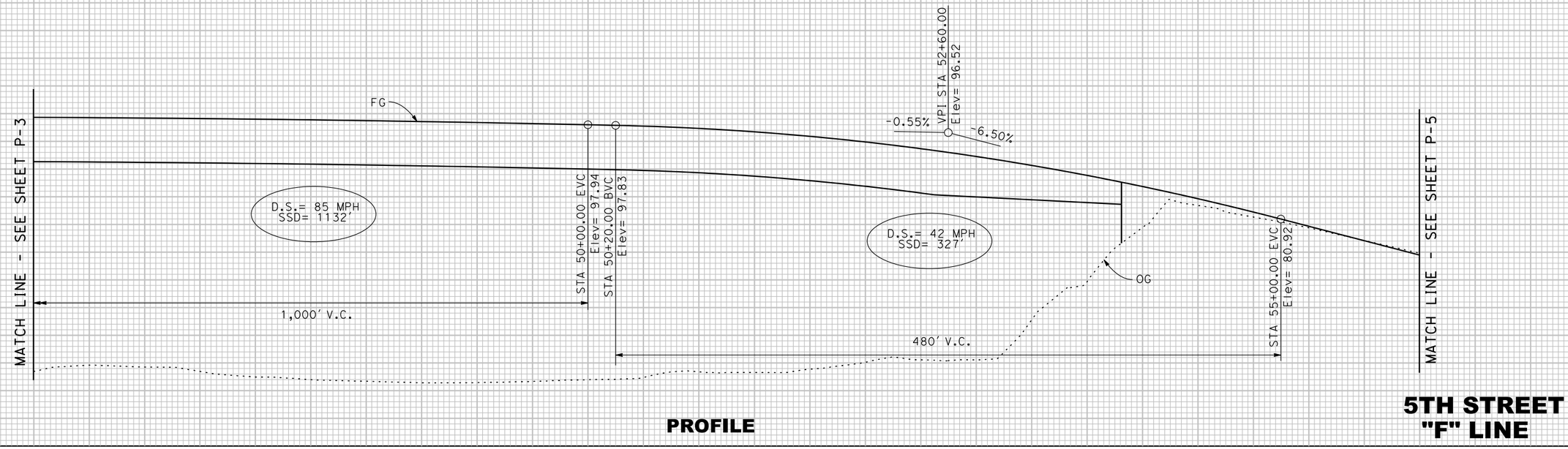
R= 2673.64' LT

MATCH LINE - SEE SHEET P-5

L+/R+ ETW & ES -2%

4% 2% 0% 2% 4%

SUPERELEVATION



PROFILE

5TH STREET "F" LINE

P-4

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

5/23/2013

...\5111\1858_fa04.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: ____ DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

MATCH LINE - SEE SHEET P-4

R= 2673.64' LT

30+68.58 EC

AXIS OF ROTATION

L+/R+ ETW & ES -2%

62+82.48
END L+ ETW & ES = -2%
END R+ ETW & ES = -2%

SUPERELEVATION

MATCH LINE - SEE SHEET P-4

350' V.C.

℄ UPR
STA 507+74.77

℄ J ST.
STA 603+50.00

STA 56+75.00 BVC
Elev= 69.54

D.S.= 36 MPH
SSD= 262'

STA 60+25.00 EVC
Elev= 58.55

STA 62+82.48
Elev= 59.10

FG

-6.50%

+0.22%

VPI STA 58+50.00
Elev= 58.17

OG

80 75 70 65 60 55 50

4% 2% 0% 2% 4%

56+00 58+00 60+00 62+00 64+00 66+00

PROFILE

5TH STREET "F" LINE

P-5

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

5/23/2013

...\5111\1858_fa05.dgn

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REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD T200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

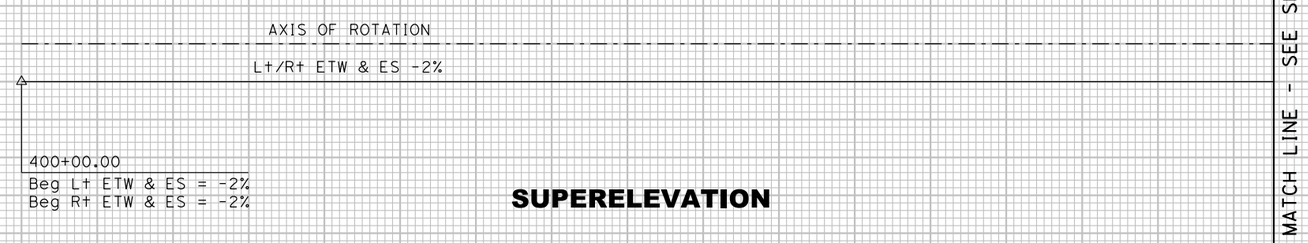
CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

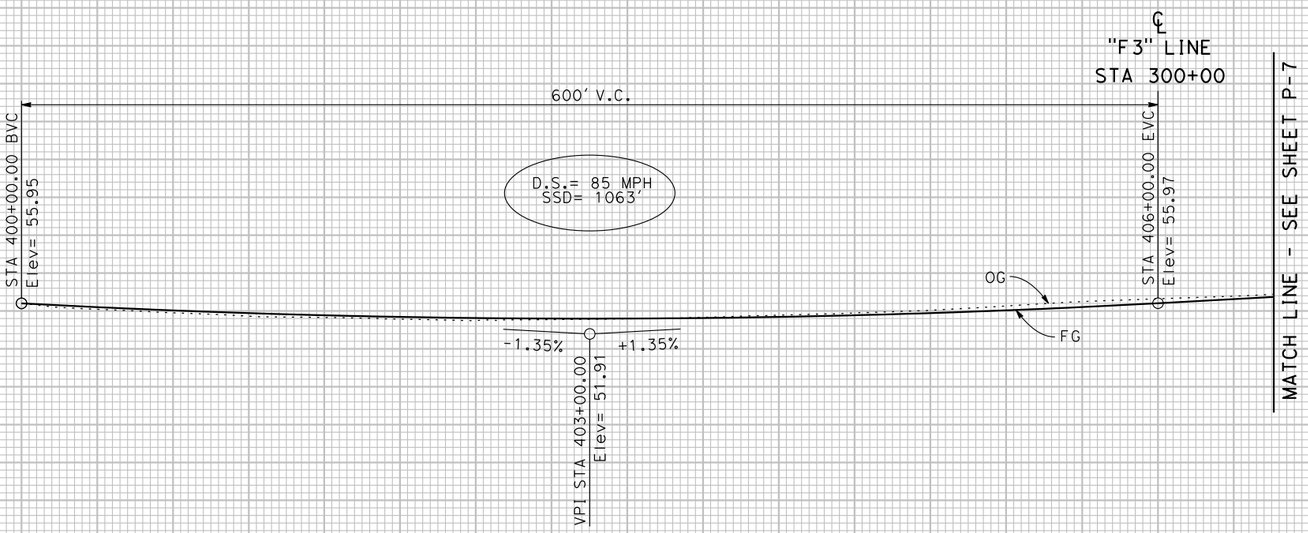
PROFILE

SHEET NO.
OF

SUPERELEVATION



PROFILE



BRIDGE STREET "B" LINE

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

P-6

5/23/2013
...\5111\1858_fa06.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE: HORIZ: 1"=40' VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

MATCH LINE - SEE SHEET P-6

4%
2%
0%
2%
4%

AXIS OF ROTATION

L+/R+ ETW & ES -2%

413+36.71
END L+ ETW & ES = -2%
END R+ ETW & ES = -2%

SUPERELEVATION

℄
"S" LINE
STA 508+66.81

MATCH LINE - SEE SHEET P-6

75
70
65
60
55
50

VPI STA 410+98.09
Elev= 62.71

STA 413+36.71
Elev= 64.74

FG
OG

+1.35%
+0.85%

PROFILE

408+00
410+00
412+00

BRIDGE STREET "B" LINE

P-7

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

5/23/2013

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REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD 1200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

4%
2%
0%
2%
4%

AXIS OF ROTATION

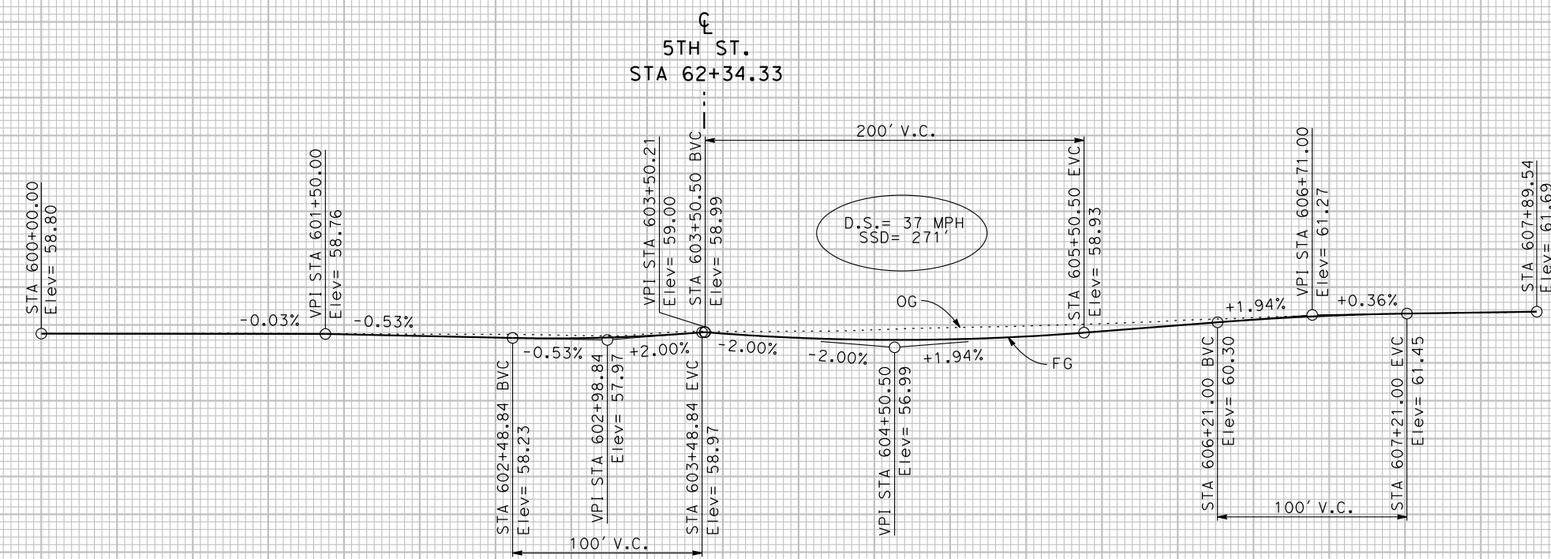
L+/R+ ETW & ES -2%

L+/R+ ETW & ES -2%

600+00.00
Beg L+ ETW & ES = -2%
Beg R+ ETW & ES = -2%

607+89.54
END L+ ETW & ES = -2%
END R+ ETW & ES = -2%

SUPERELEVATION



PROFILE

J STREET
"J" LINE

75
70
65
60
55
50

600+00 602+00 604+00 606+00 608+00

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

P-8

5/23/2013

...\511\1858_fa08.dgn

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REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

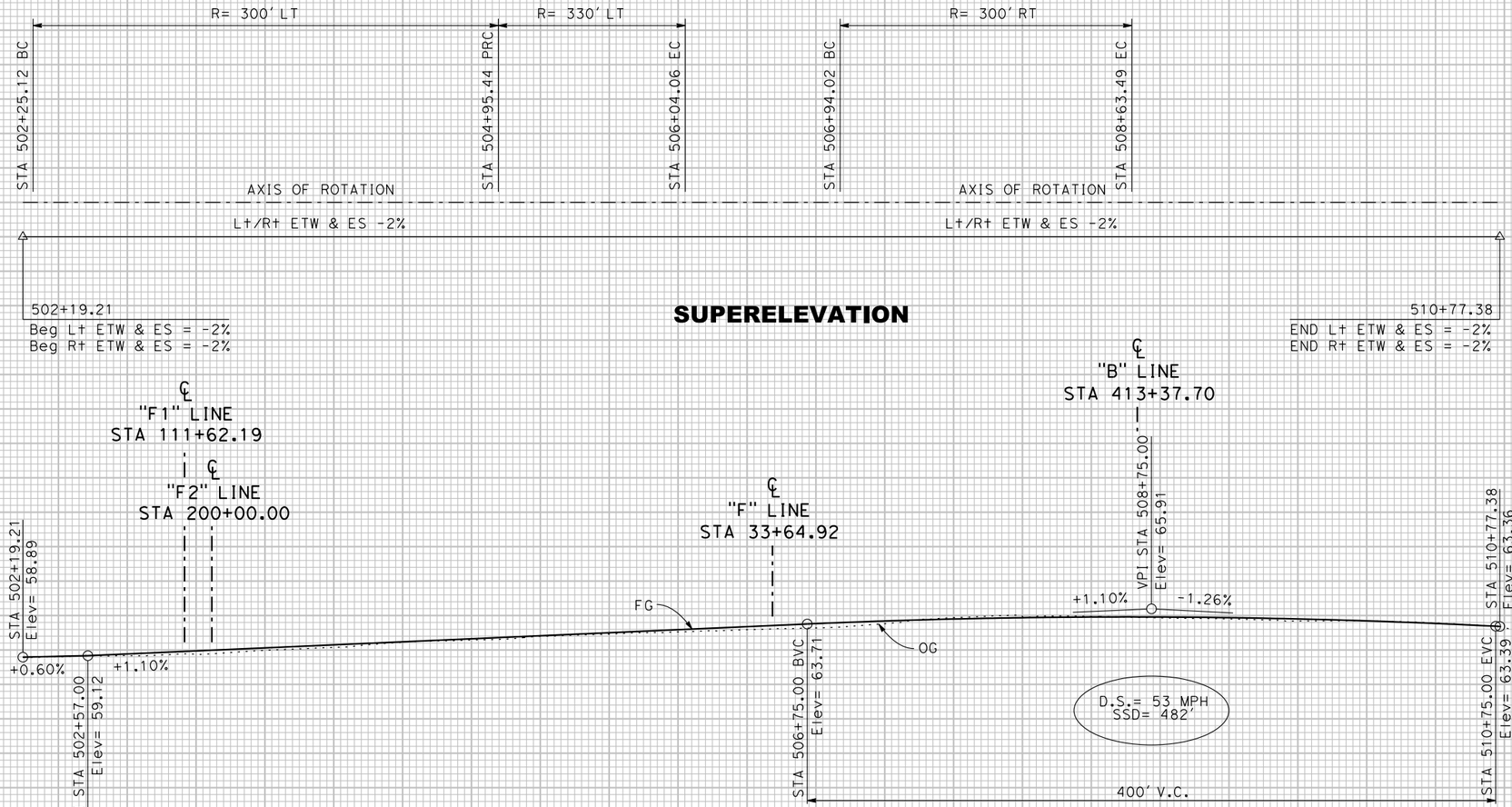
DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF
YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF



FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
ALL DIMENSIONS SHOWN IN FEET
UNLESS OTHERWISE NOTED

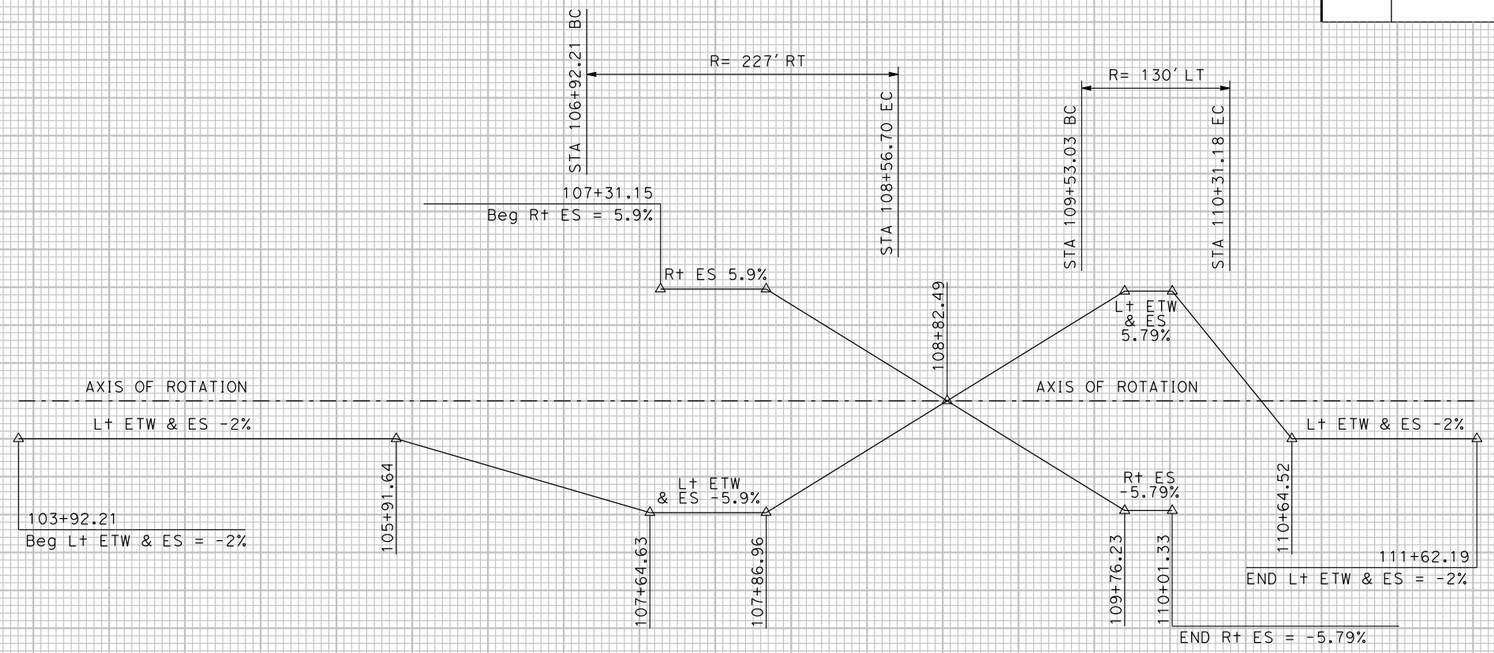
P-9

5/23/2013

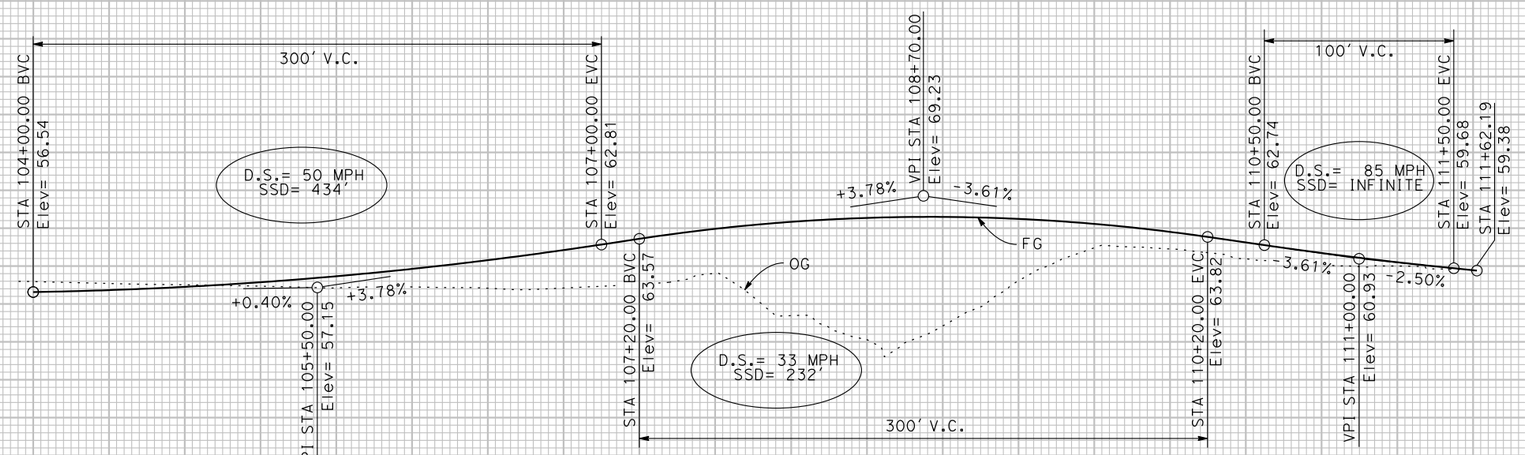
...\511\858_fa09.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA



SUPERELEVATION



PROFILE

104+00 106+00 108+00 110+00 112+00

WB ON-RAMP "F1" LINE

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE NOTED

P-10

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD 7200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

5/23/2013

...\511\1858_fa10.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

PLAN SCALE: 1"=40'
PROFILE SCALE: 1"=40'
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

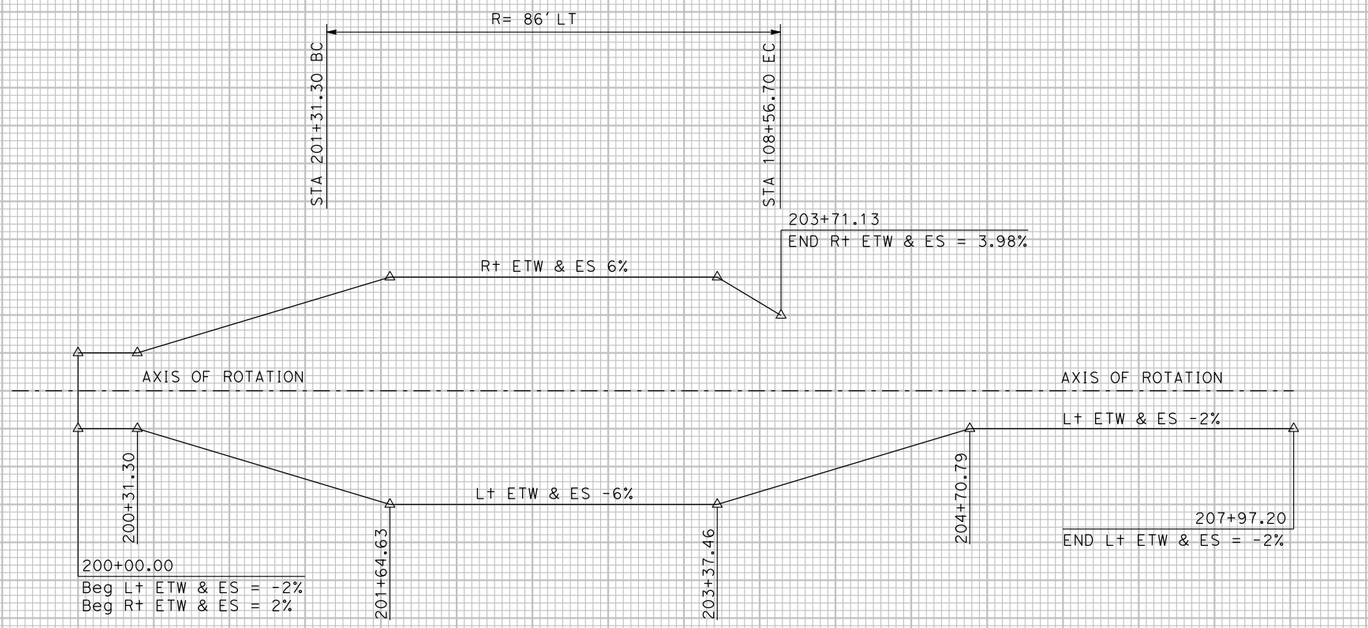
DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 985-1845

CITY OF YUBA CITY

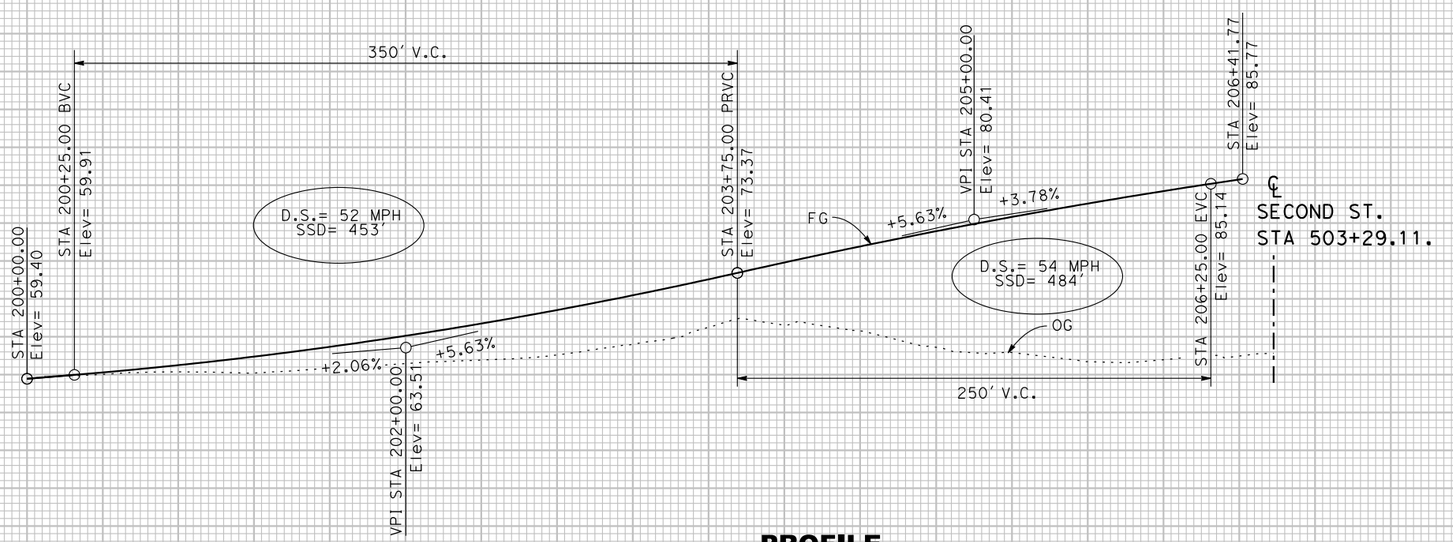
5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF



SUPERELEVATION



PROFILE

200+00 202+00 204+00 206+00 208+00

WB OFF-RAMP "F2" LINE

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE NOTED

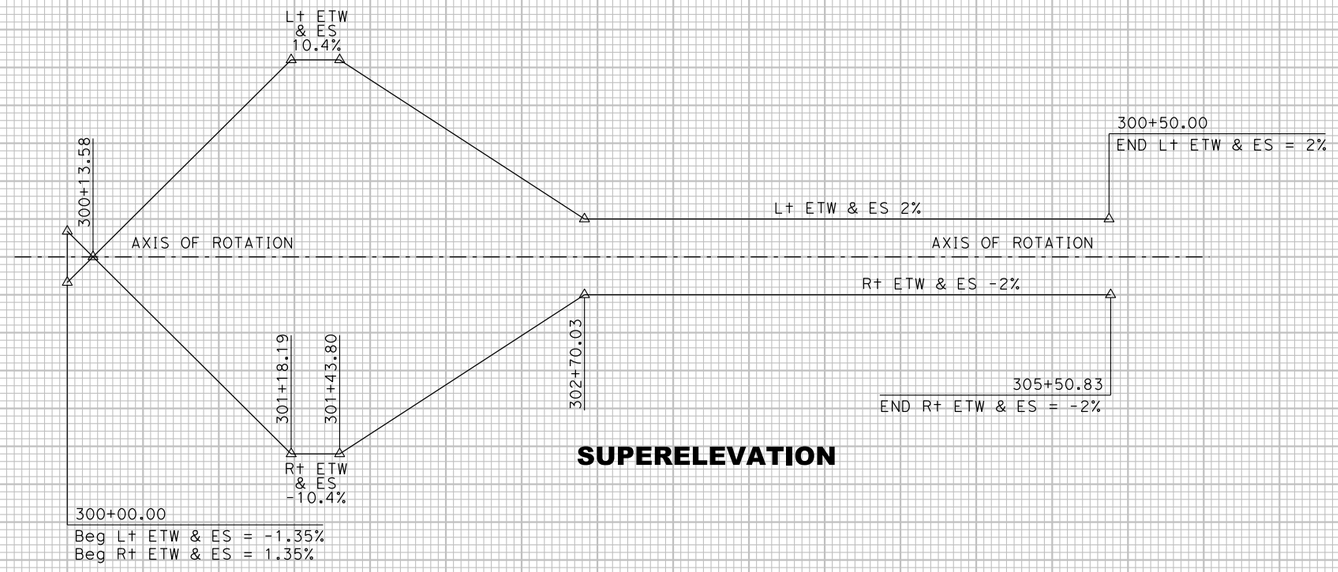
P-11

5/23/2013

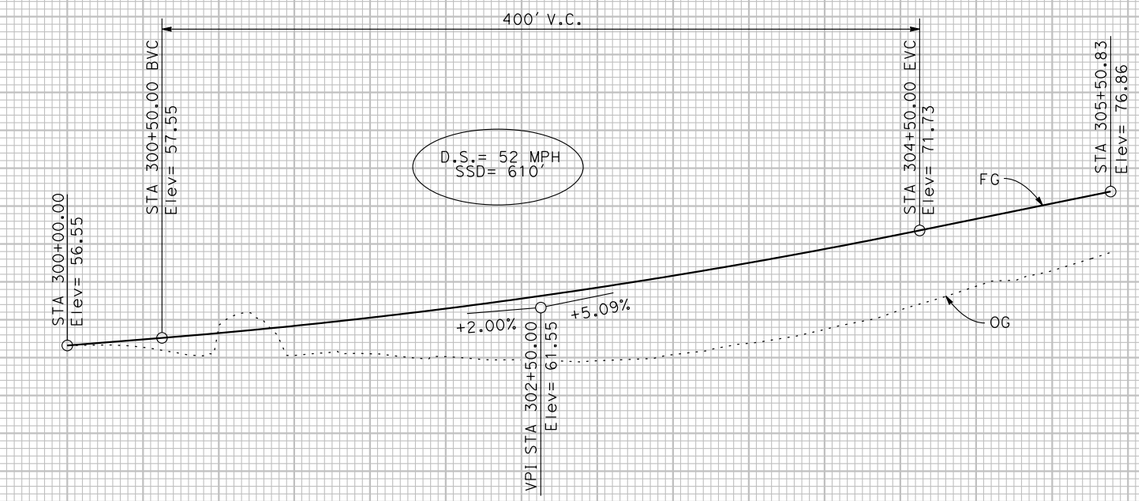
...\511\1858_fall.dgn

REVISION #	DATE:	DESCRIPTION AND SHEET NO.:	APPROVED BY:	DATE:

REGISTERED PROFESSIONAL ENGINEER
MEGAN R. CARTER
No. 75885
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA



SUPERELEVATION



PROFILE

EB ON-RAMP "F3" LINE

300+00 302+00 304+00 306+00 308+00 310+00

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE NOTED

P-12

PLAN SCALE: 1"=40'
PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=X'

CONTRACT NO:
DESIGNED: M. CARTER
DRAWN: D. CLARK
CHECKED: M. GRIGOS
RECORD DRAWING: DATE:

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD T200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

CITY OF YUBA CITY

5TH STREET BRIDGE REPLACEMENT

PROFILE

SHEET NO.
OF

5/23/2013

...\5I\1858_fal2.dgn

ATTACHMENT E – STRUCTURE GENERAL PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

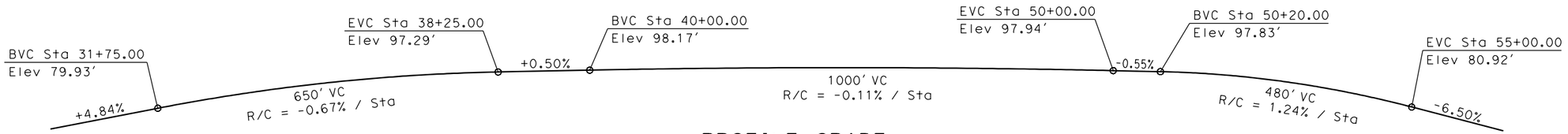
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

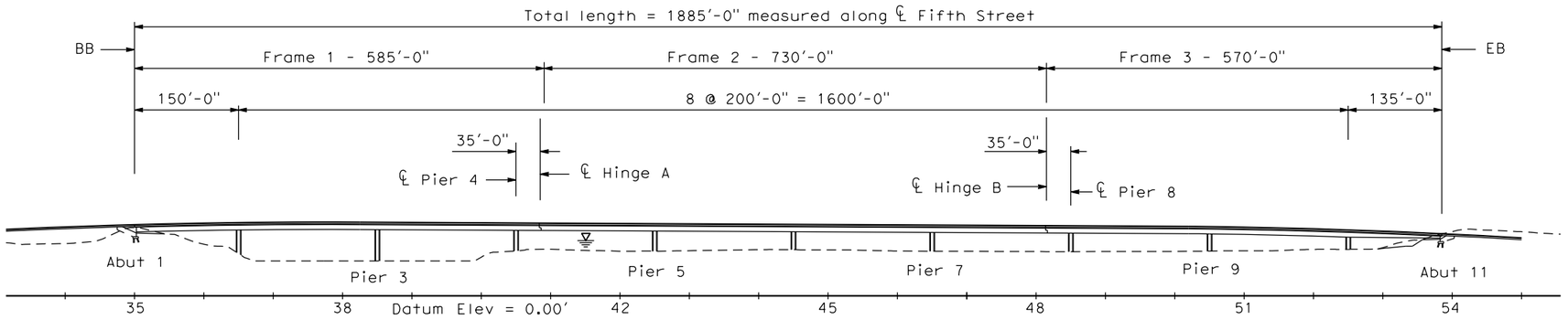
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



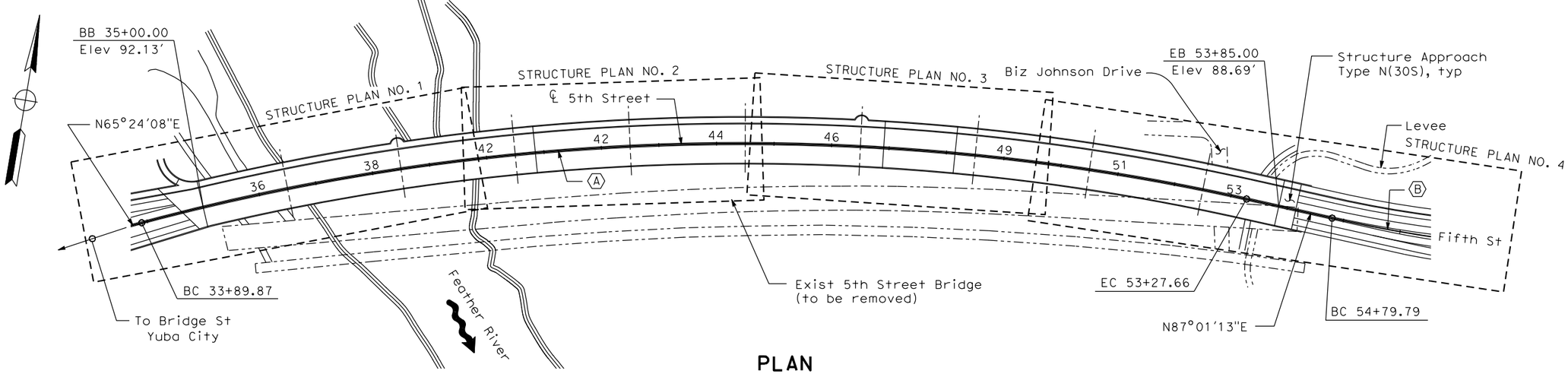
PROFILE GRADE

No Scale



DEVELOPED ELEVATION

1" = 100'



PLAN

1" = 100'

▽ 100 yr WSE = 76.3
200 yr WSE = 76.6

CURVE DATA

Ⓐ	Ⓑ
R = 4026.01'	R = 2763.64'
△ = 27°34'39"	△ = 9°06'01"
T = 1937.79'	T = 424.66'
L = 988.05'	L = 219.94'

NOTES:

1. All Elevations are NAVD 88.
2. Typical Sections on separate sheets.

X DESIGN OVERSIGHT	DESIGN	BY M. Hancock	CHECKED T. Osterkamp	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	PREPARED FOR THE CITY OF YUBA CITY DEPARTMENT OF PUBLIC WORKS	T. Osterkamp PROJECT ENGINEER
X SIGN OFF DATE	DETAILS	BY C. Houghton	CHECKED X	LAYOUT	BY X / CHECKED X		BRIDGE NO. 18C0012
	QUANTITIES	BY X	CHECKED X	SPECIFICATIONS	BY X / PLANS AND SPECS COMPARED X		POST MILES X

5TH STREET BRIDGE (REPLACE)

GENERAL PLAN

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
X					1	-

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USERNAME => untitled DATE PLOTTED => 5/24/2013 TIME PLOTTED => 4:03:45 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

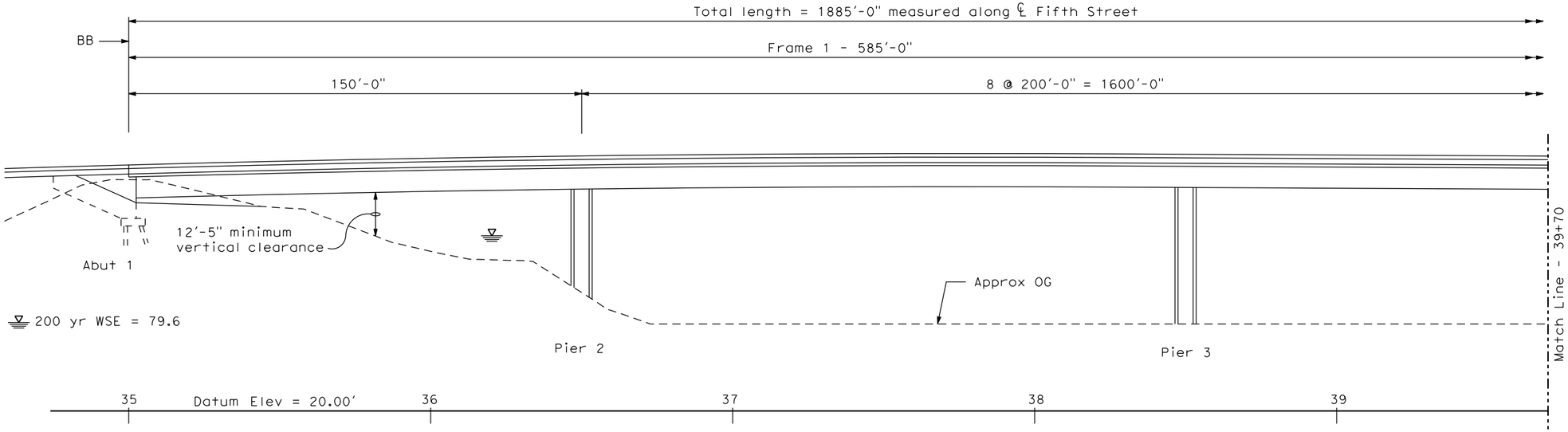
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

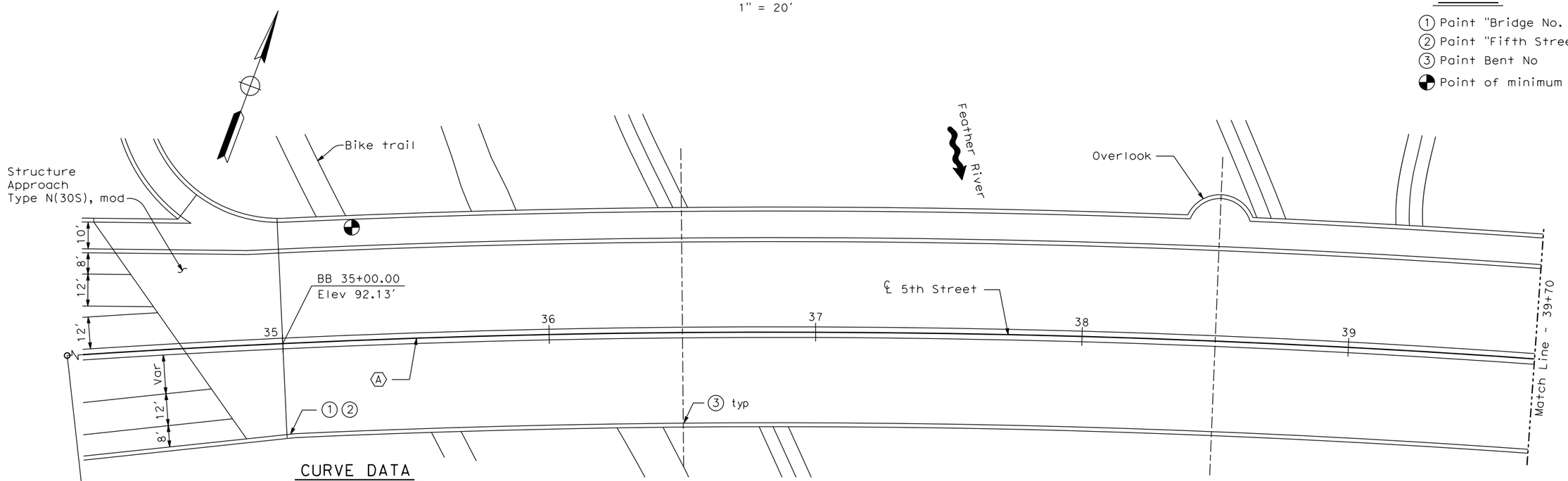
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



DEVELOPED ELEVATION

1" = 20'



CURVE DATA

Ⓐ

R = 4026.01'
△ = 27°34'39"
T = 1937.79'
L = 988.05'

PLAN

1" = 20'

LEGEND

1. Paint "Bridge No. 18C-0012"
2. Paint "Fifth Street Bridge"
3. Paint Bent No

Point of minimum vertical clearance

DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY C. Houghton	CHECKED -	
QUANTITIES	BY -	CHECKED -	

- DESIGN OVERSIGHT
- SIGN OFF DATE

T. Osterkamp — PROJECT ENGINEER

BRIDGE NO. 18C-0012 — POST MILES -

5TH STREET BRIDGE (REPLACE)
STRUCTURE PLAN NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
-					-	-

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

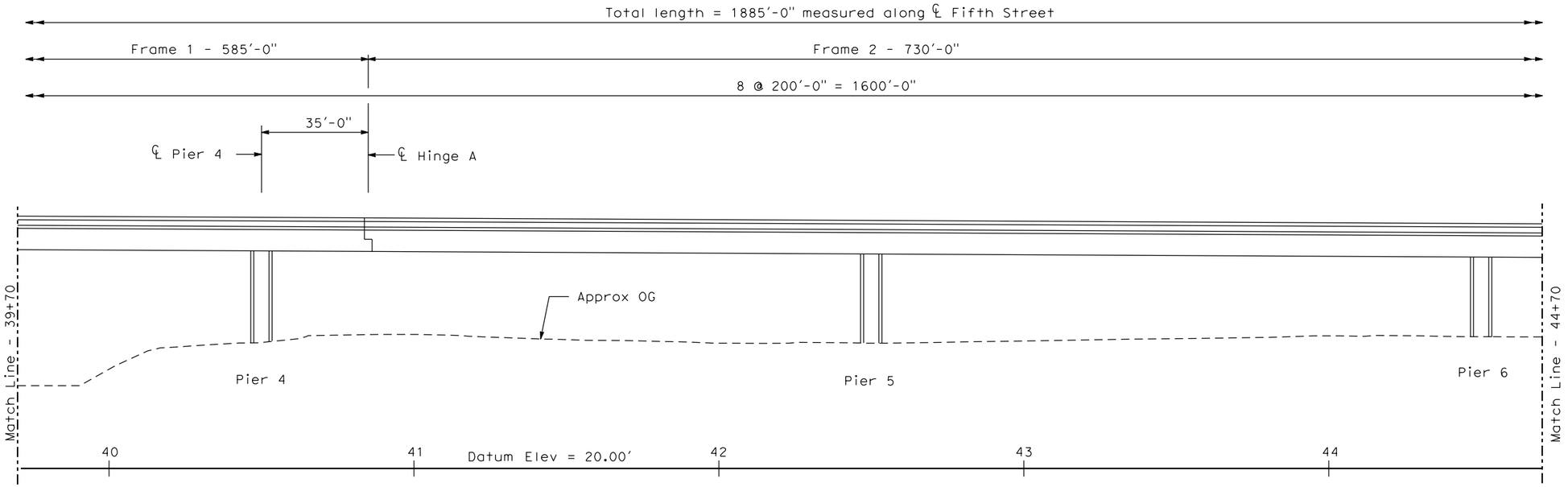
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

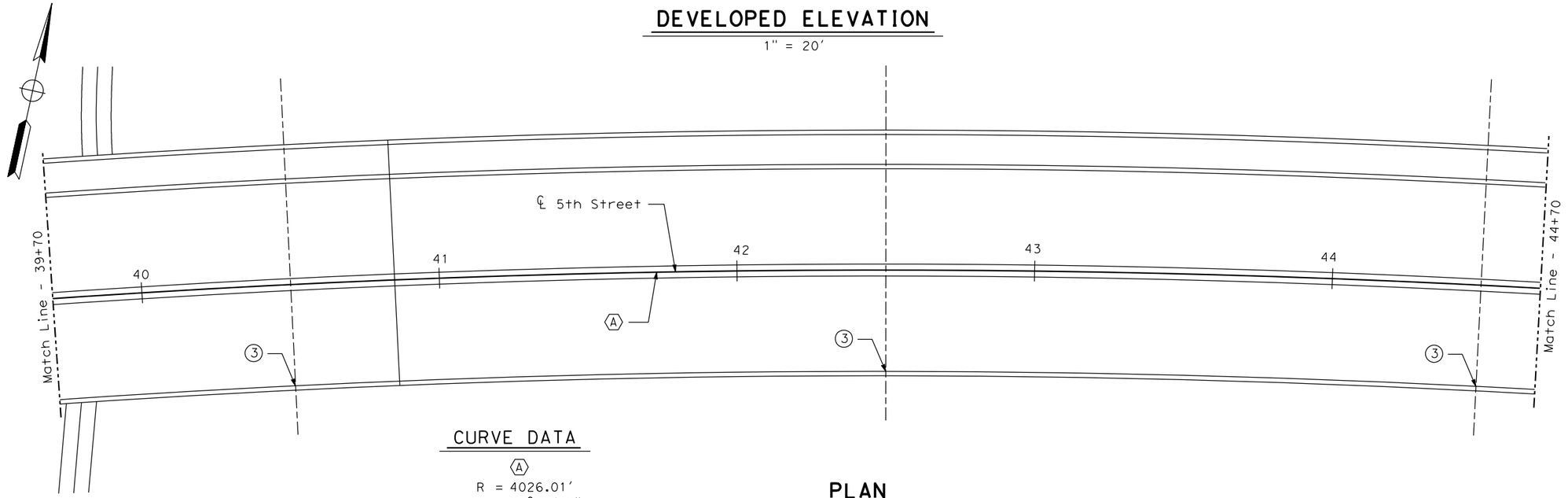
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



DEVELOPED ELEVATION

1" = 20'



CURVE DATA

(A)

R = 4026.01'
△ = 27°34'39"
T = 1937.79'
L = 988.05'

PLAN

1" = 20'

LEGEND

(3) Paint Bent No

DESIGN OVERSIGHT		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
SIGN OFF DATE		DETAILS	BY C. Houghton	CHECKED -	
		QUANTITIES	BY -	CHECKED -	

T. Osterkamp
PROJECT ENGINEER

BRIDGE NO. 18C-0012
POST MILES -

5TH STREET BRIDGE (REPLACE)
STRUCTURE PLAN NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
-					-	-

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

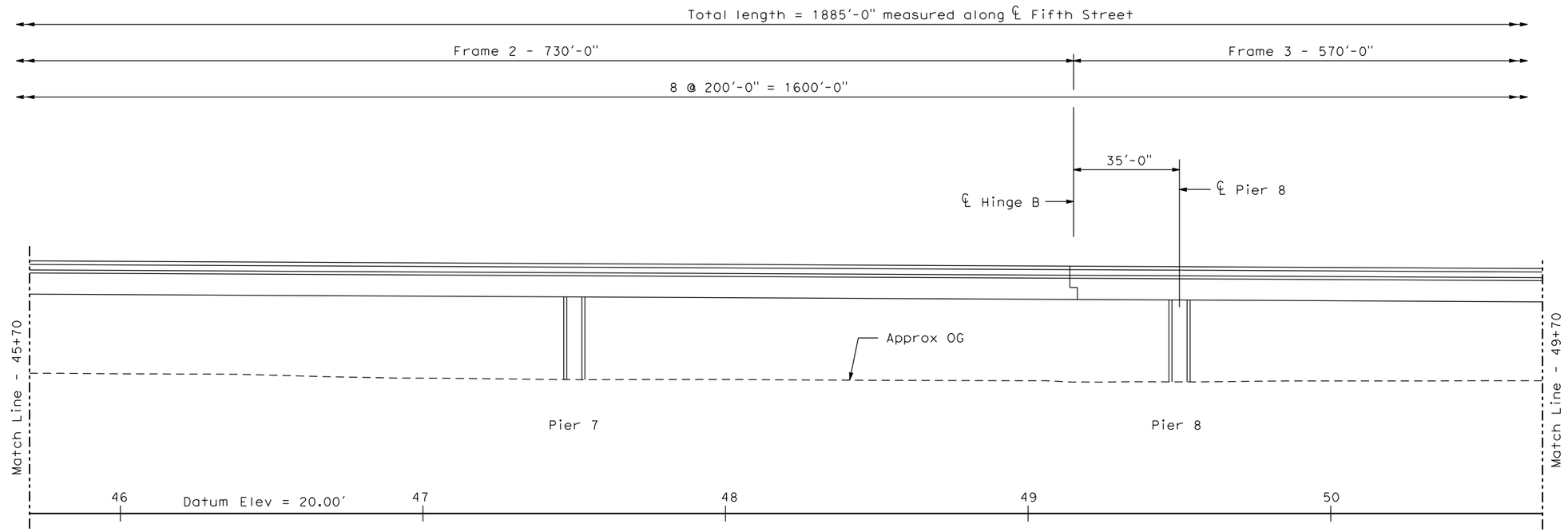
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

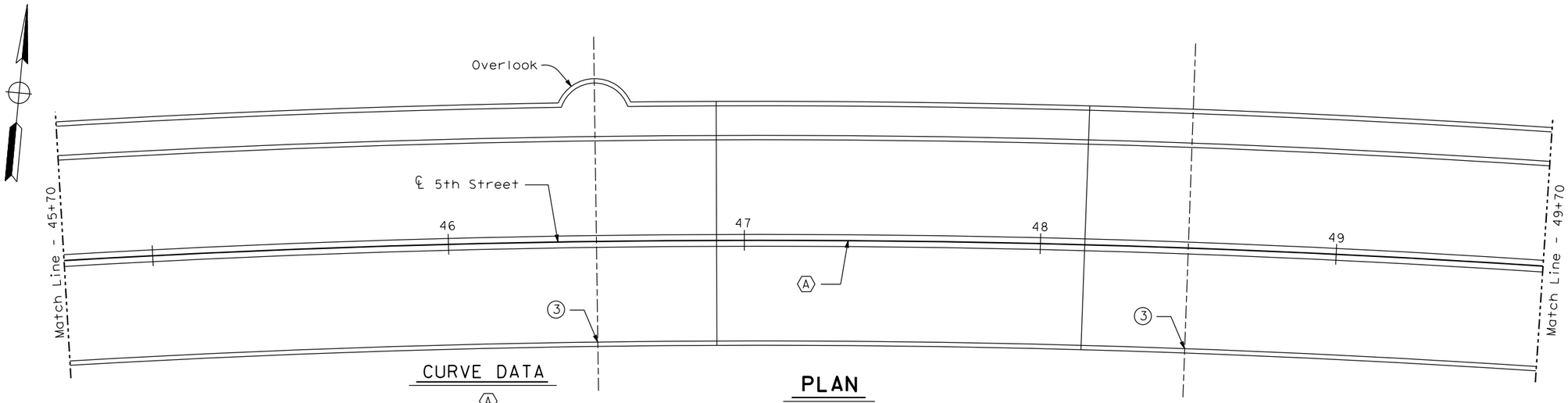
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



DEVELOPED ELEVATION

1" = 20'



CURVE DATA

Ⓐ

R = 4026.01'
△ = 27°34'39"
T = 1937.79'
L = 988.05'

PLAN

1" = 20'

LEGEND

③ Paint Bent No

DESIGN OVERSIGHT		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
SIGN OFF DATE		DETAILS	BY C. Houghton	CHECKED -	T. Osterkamp, PROJECT ENGINEER
		QUANTITIES	BY -	CHECKED -	BRIDGE NO. 18C-0012; POST MILES -

5TH STREET BRIDGE (REPLACE)
STRUCTURE PLAN NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
-					-	-

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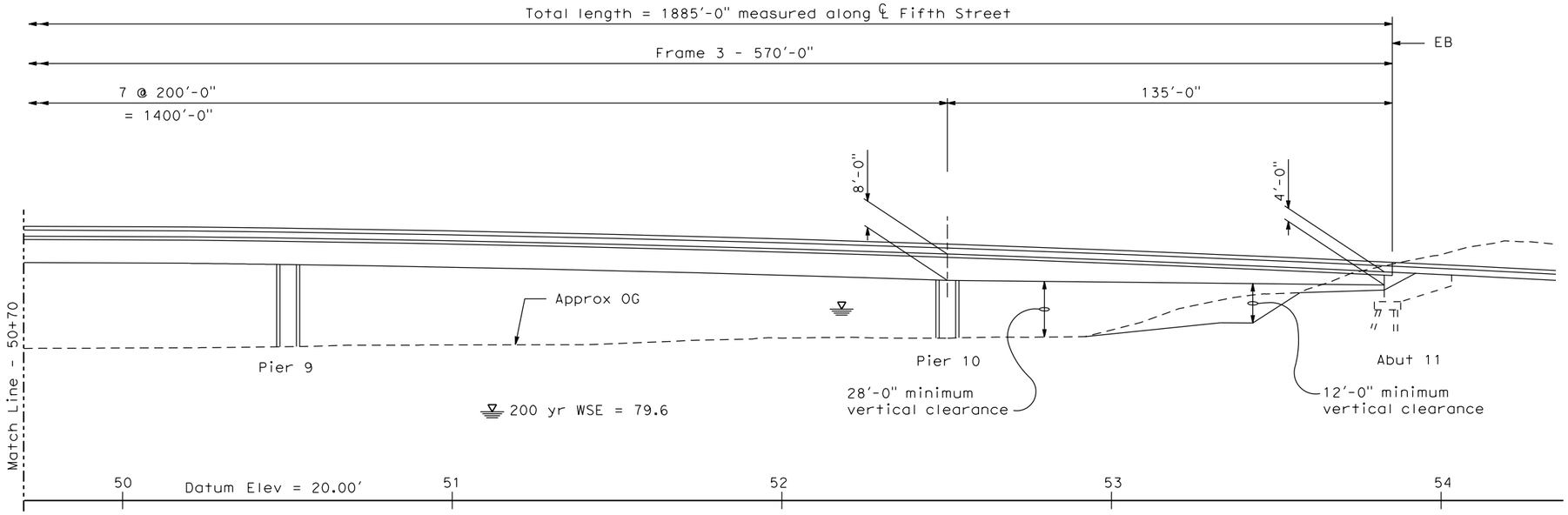
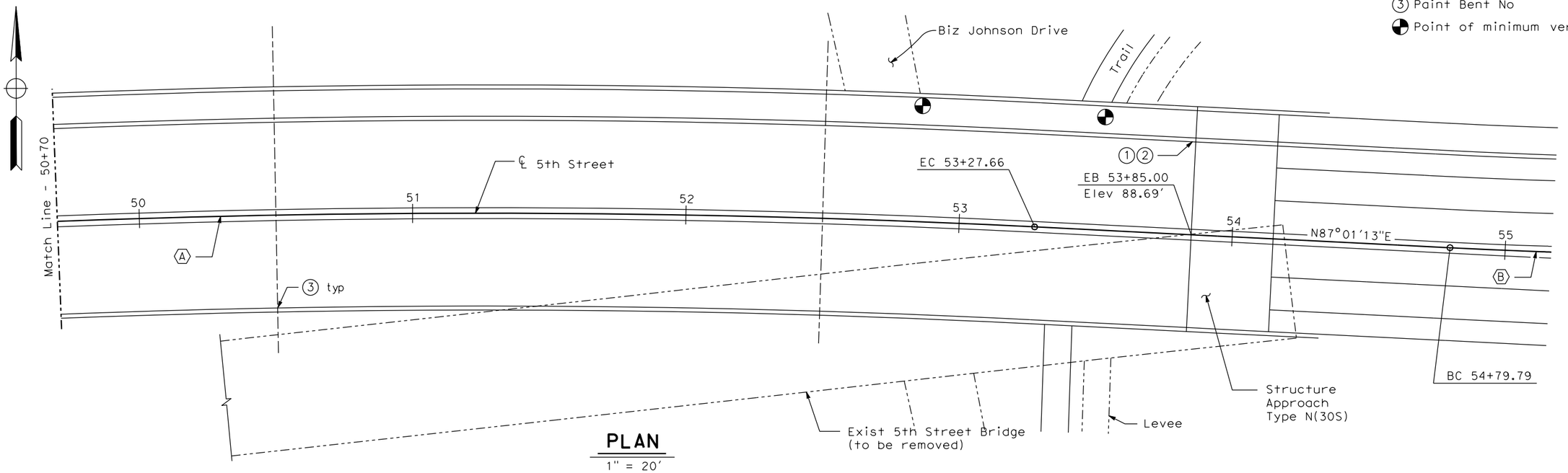


DEVELOPED ELEVATION

1" = 20'



PLAN

1" = 20'

LEGEND

1. Paint "Bridge No. 18C-0012"
2. Paint "Fifth Street Bridge"
3. Paint Bent No

Point of minimum vertical clearance

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642

DESIGN OVERSIGHT —

SIGN OFF DATE —

	BY	CHECKED
DESIGN	M. Hancock	T. Osterkamp
DETAILS	C. Houghton	-
QUANTITIES	-	-

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

T. Osterkamp
PROJECT ENGINEER

BRIDGE NO. 18C-0012
POST MILES -

5TH STREET BRIDGE (REPLACE)
STRUCTURE PLAN NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
-					-	-

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

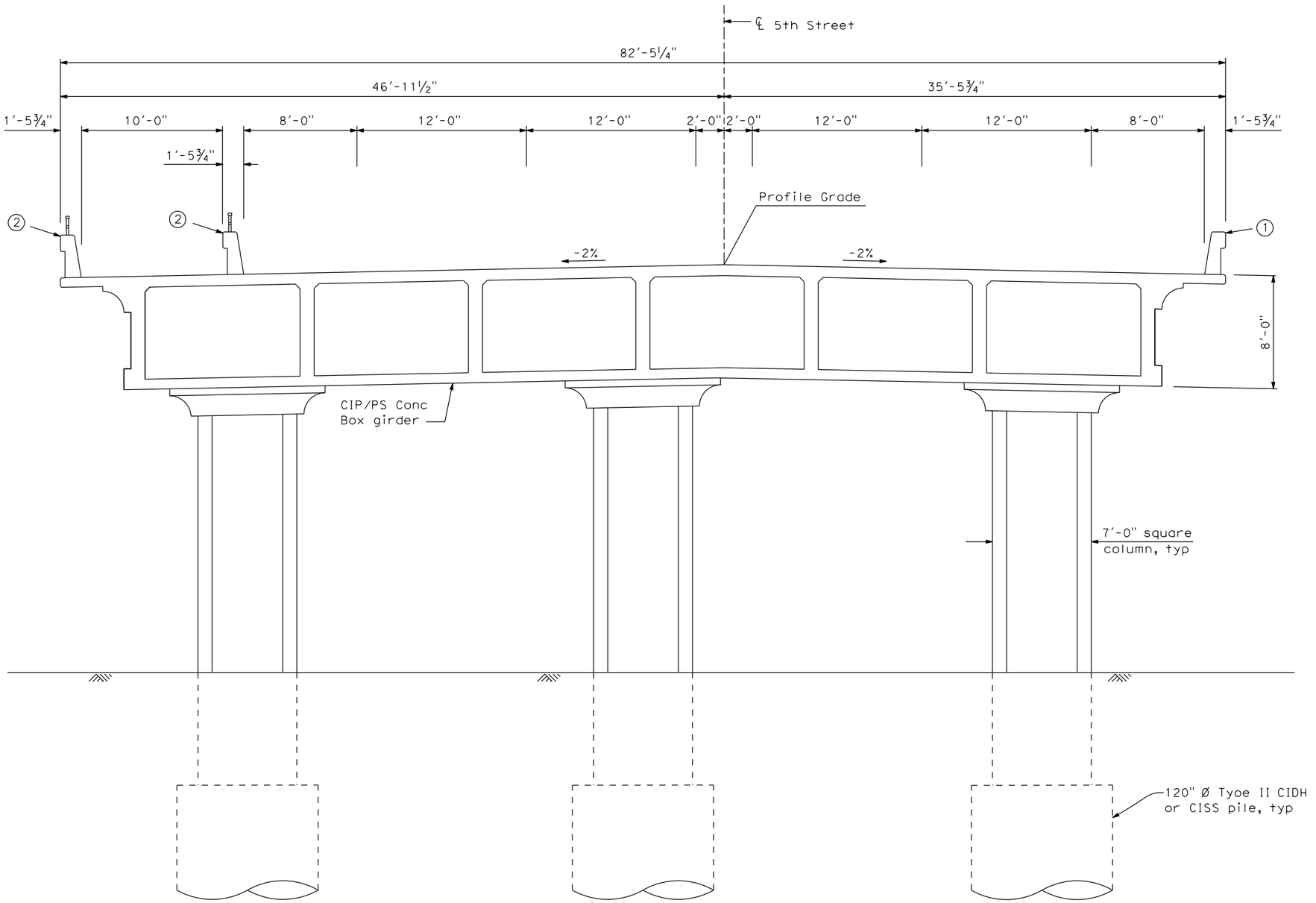
REGISTERED CIVIL ENGINEER — DATE –

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
T. OSTERKAMP
No. C46783
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



TYPICAL SECTION - SPANS 1 THRU 9

¼" = 1'-0"

LEGEND

(1) Denotes Concrete Barrier Type 732
(2) Denotes Concrete Barrier Type 732 with Tubular Hand Railing

– DESIGN OVERSIGHT – SIGN OFF DATE		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	T. Osterkamp PROJECT ENGINEER	BRIDGE NO. 18C-0012 / POST MILES –	5TH STREET BRIDGE (REPLACE) TYPICAL SECTION NO. 1
		DETAILS	BY C. Houghton	CHECKED –				
		QUANTITIES	BY –	CHECKED –				

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: – PROJECT NUMBER & PHASE: – CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
–					–	–

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

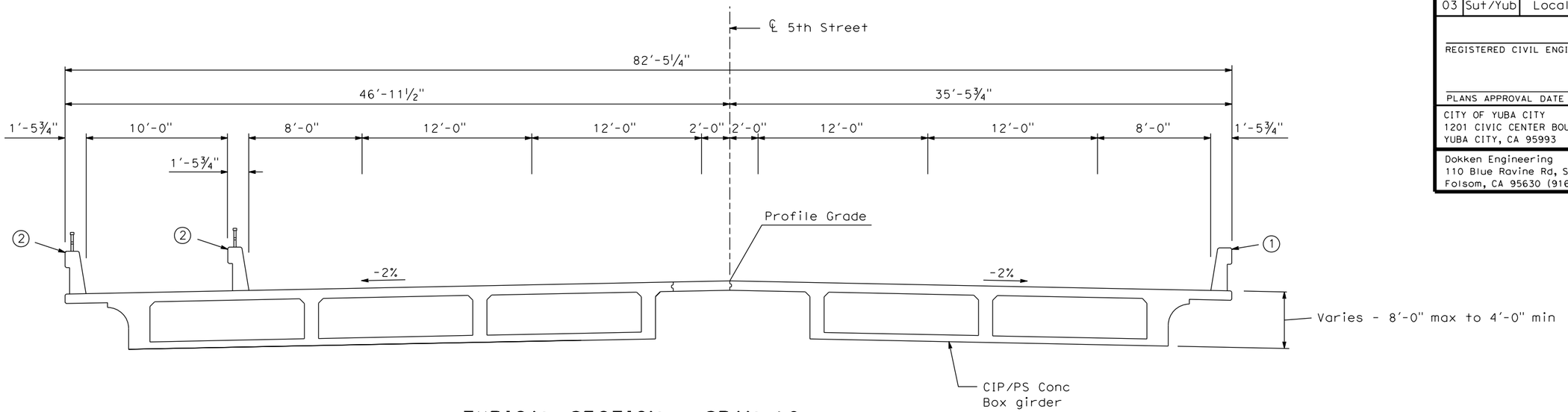
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642

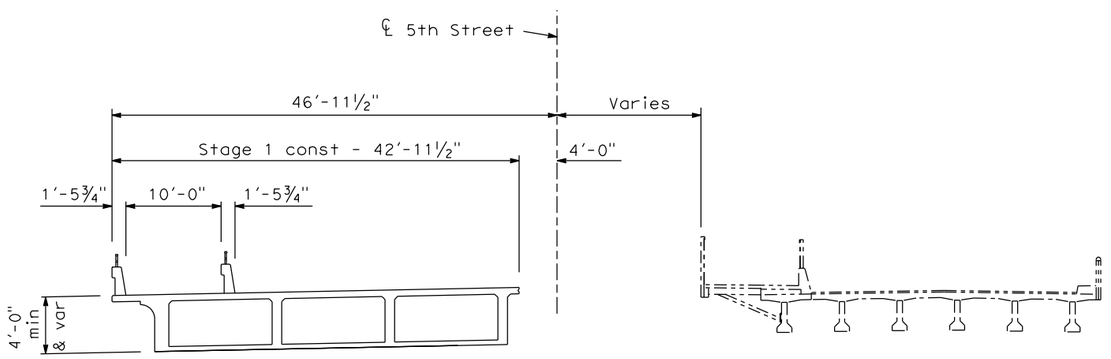


TYPICAL SECTION - SPAN 10

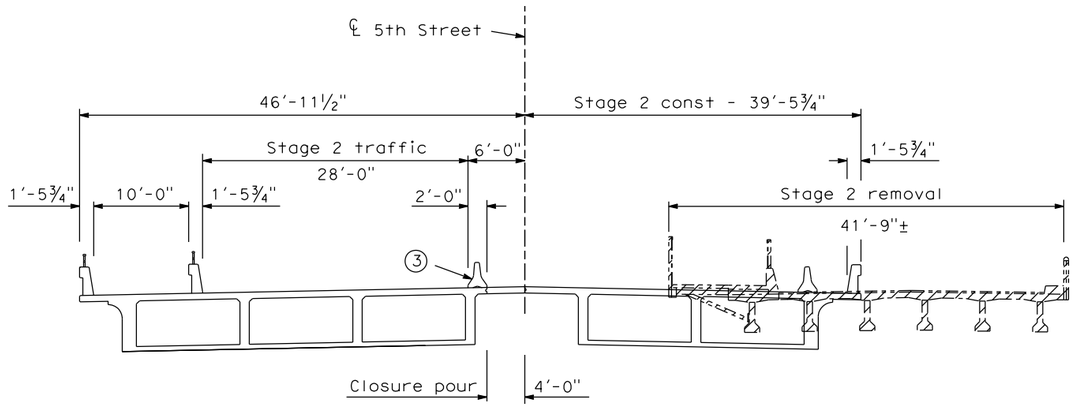
¼" = 1'-0"

LEGEND

(1) Denotes Concrete Barrier Type 732
(2) Denotes Concrete Barrier Type 732 with Tubular Hand Railing
(3) Denotes Temporary Railing Type K
Denotes exist structure removal
Denotes exist structure



STAGE 1



STAGE 2

STAGE CONSTRUCTION - FRAME 3

¼" = 1'-0"

- DESIGN OVERSIGHT - SIGN OFF DATE		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	T. Osterkamp PROJECT ENGINEER	BRIDGE NO. 18C-0012 POST MILES -	5TH STREET BRIDGE (REPLACE) TYPICAL SECTION NO. 2
		DETAILS	BY C. Houghton	CHECKED -				
		QUANTITIES	BY -	CHECKED -				

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: -
PROJECT NUMBER & PHASE: - CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
-					-	-

FILE => J:\1858_5th_St_BR\517\ALT_1\1858TS2.dgn

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

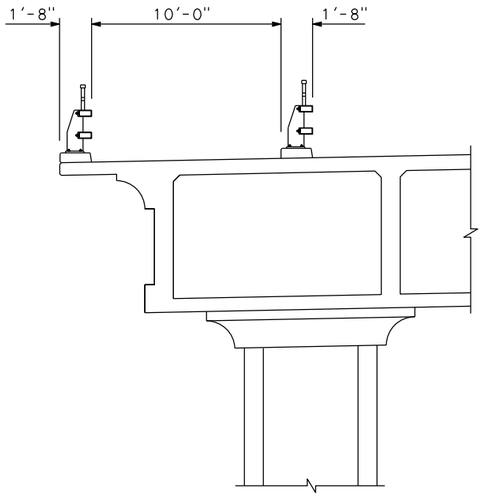
REGISTERED CIVIL ENGINEER — DATE –

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
T. OSTERKAMP
No. C46783
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

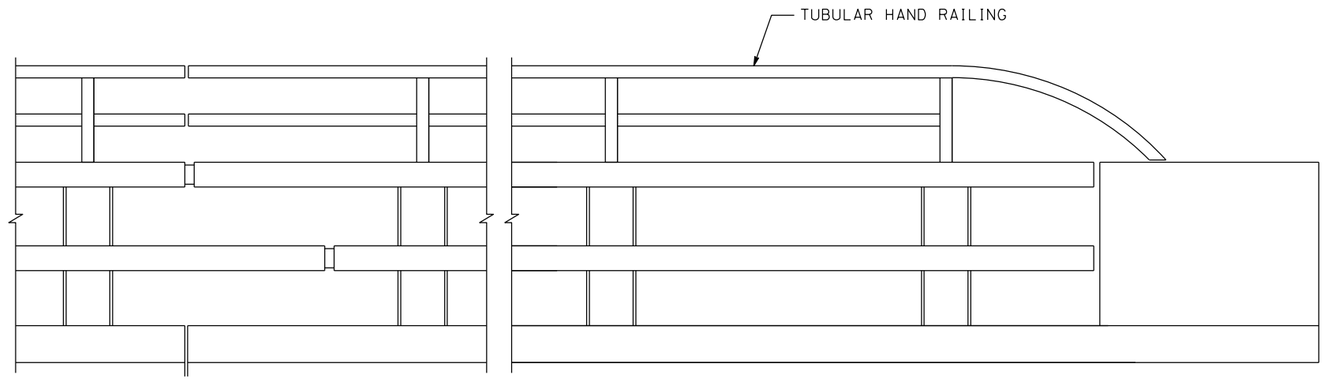
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



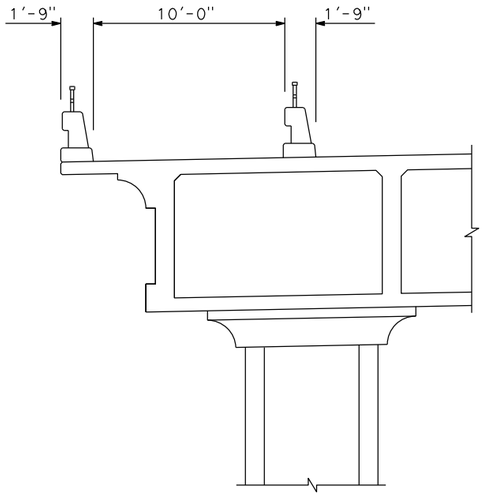
CALIFORNIA ST-10 BRIDGE RAIL

NO SCALE



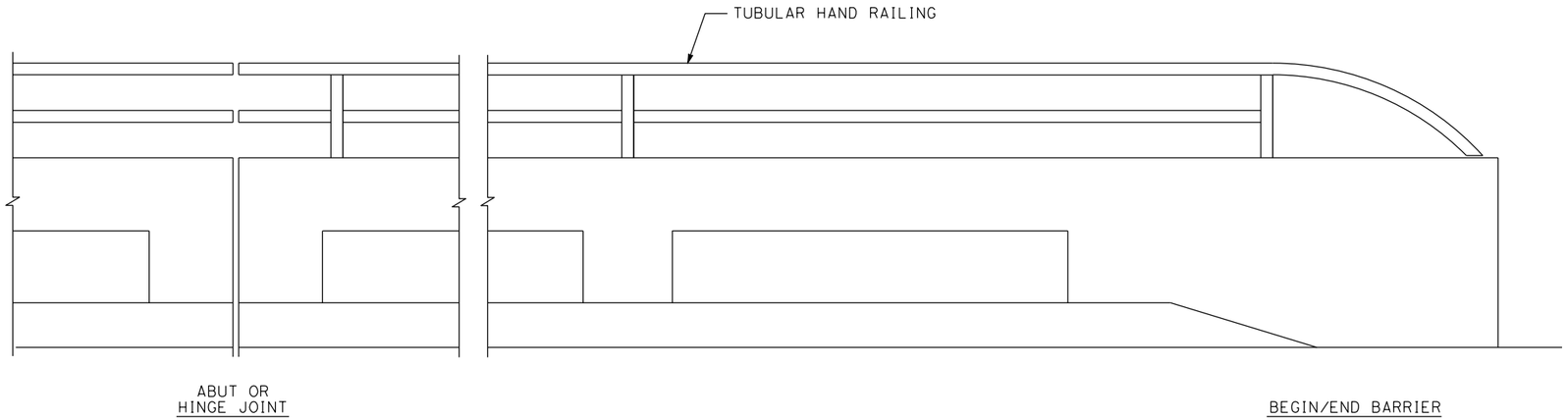
PART ELEVATION - CALIFORNIA ST-10

NO SCALE



CONCRETE BARRIER TYPE 80

NO SCALE



PART ELEVATION - TYPE 80

NO SCALE

– DESIGN OVERSIGHT – SIGN OFF DATE		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	T. Osterkamp PROJECT ENGINEER	BRIDGE NO. 18C-0012 / POST MILES –	5TH STREET BRIDGE (REPLACE) BARRIER OPTIONS No. 1
		DETAILS	BY C. Houghton	CHECKED –				
		QUANTITIES	BY –	CHECKED –				

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: – PROJECT NUMBER & PHASE: – CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
–					–	–

FILE => J:\1858_5th_St_BR\517\ALT_1\1858TSBARR.dgn

USERNAME => untitled DATE PLOTTED => 5/24/2013 TIME PLOTTED => 4:10:07 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

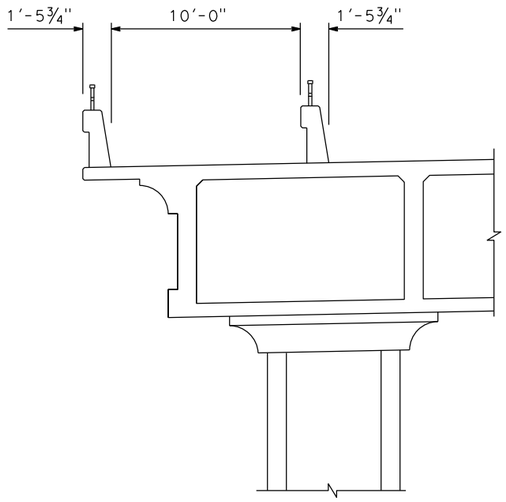
REGISTERED CIVIL ENGINEER — DATE –

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T. OSTERKAMP — No. C46783 — Exp. 6/30/13 — CIVIL — STATE OF CALIFORNIA

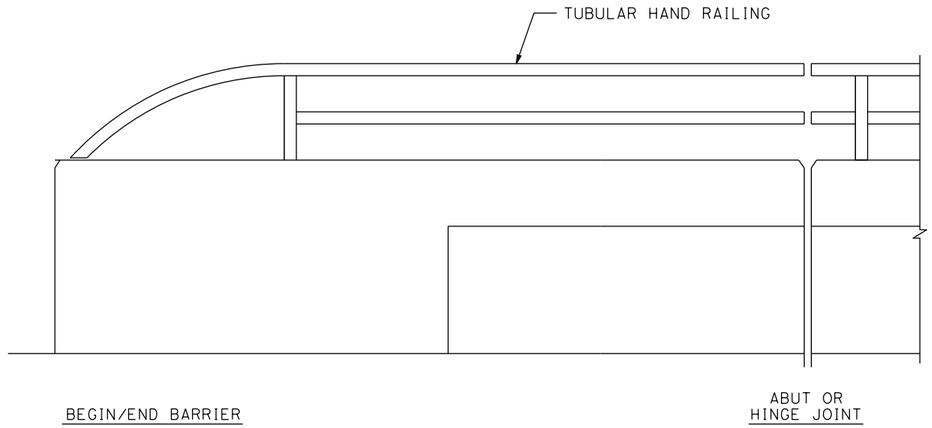
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



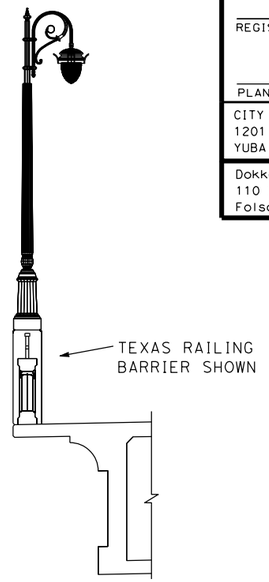
CONCRETE BARRIER TYPE 732

NO SCALE



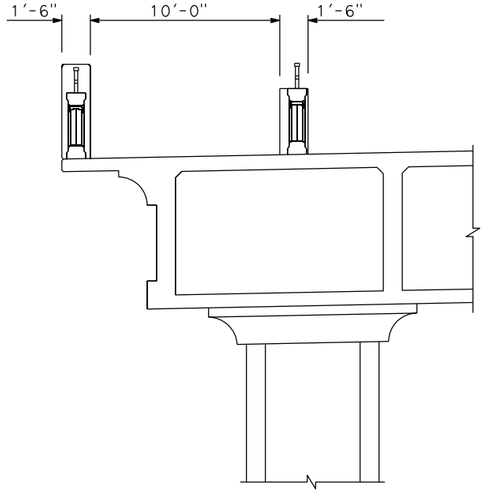
PART ELEVATION - TYPE 732

NO SCALE



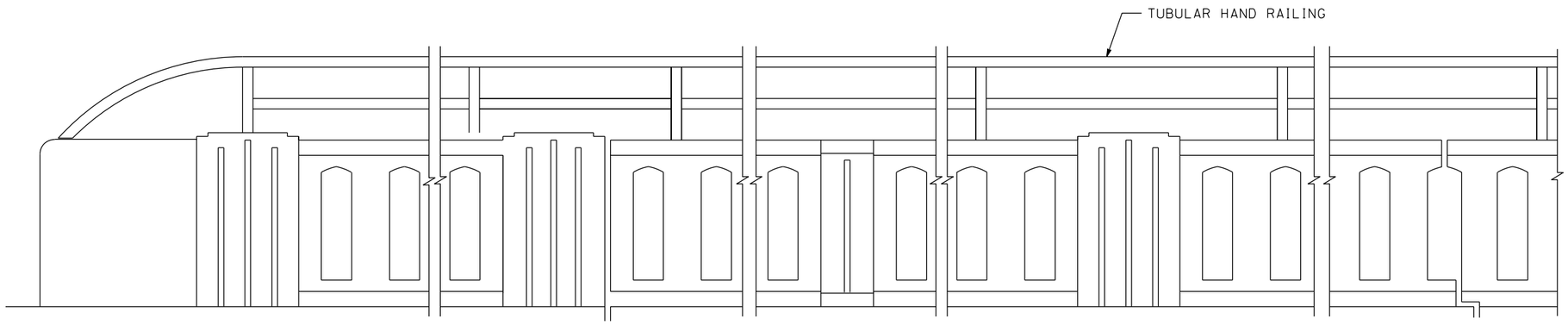
ELECTROLIER

NO SCALE



TEXAS RAILING

NO SCALE



PART ELEVATION - TEXAS RAILING

NO SCALE

– DESIGN OVERSIGHT – SIGN OFF DATE		DESIGN	BY M. Hancock	CHECKED T. Osterkamp	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	T. Osterkamp PROJECT ENGINEER	BRIDGE NO. 18C-0012 / POST MILES –	5TH STREET BRIDGE (REPLACE) BARRIER OPTIONS No. 2
		DETAILS	BY C. Houghton	CHECKED –				
		QUANTITIES	BY –	CHECKED –				

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: – PROJECT NUMBER & PHASE: – CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
–					–	–

FILE => J:\1858_5th_St_BR\517\ALT_1\1858TSBARR2.dgn

USERNAME => untitled DATE PLOTTED => 5/24/2013 TIME PLOTTED => 4:10:13 PM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Sut/Yub	Local			

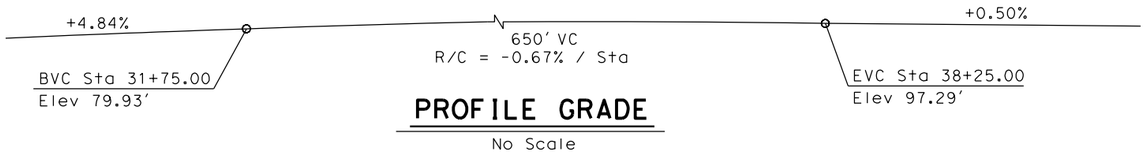
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

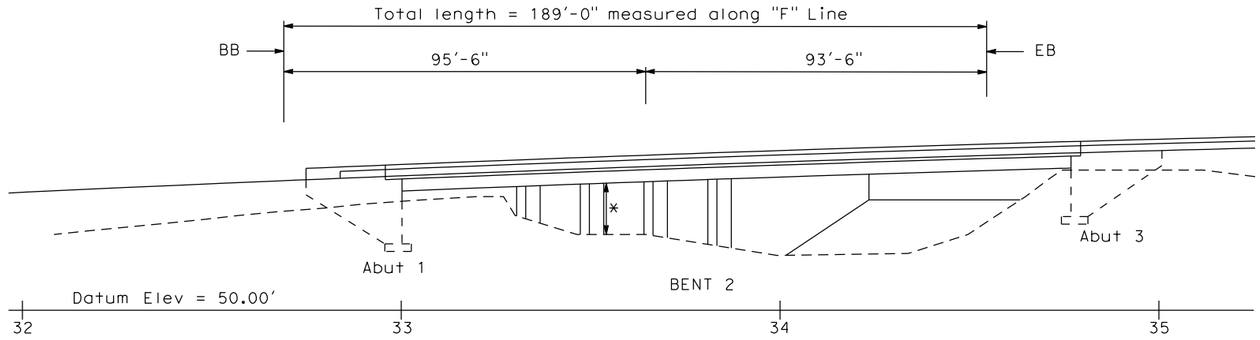
CITY OF YUBA CITY
1201 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Dokken Engineering
110 Blue Ravine Rd, Suite 200
Folsom, CA 95630 (916) 858-0642



PROFILE GRADE

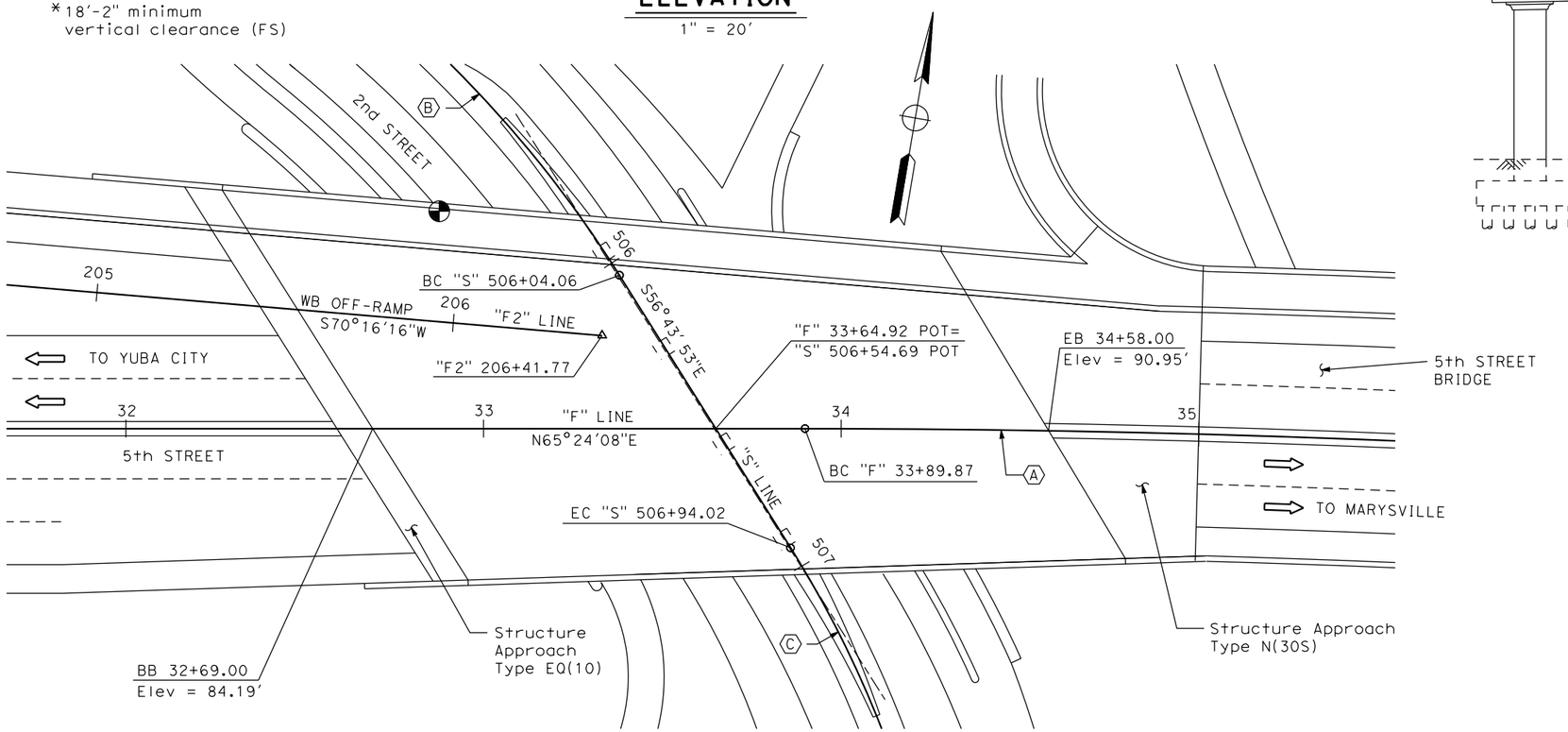
No Scale



ELEVATION

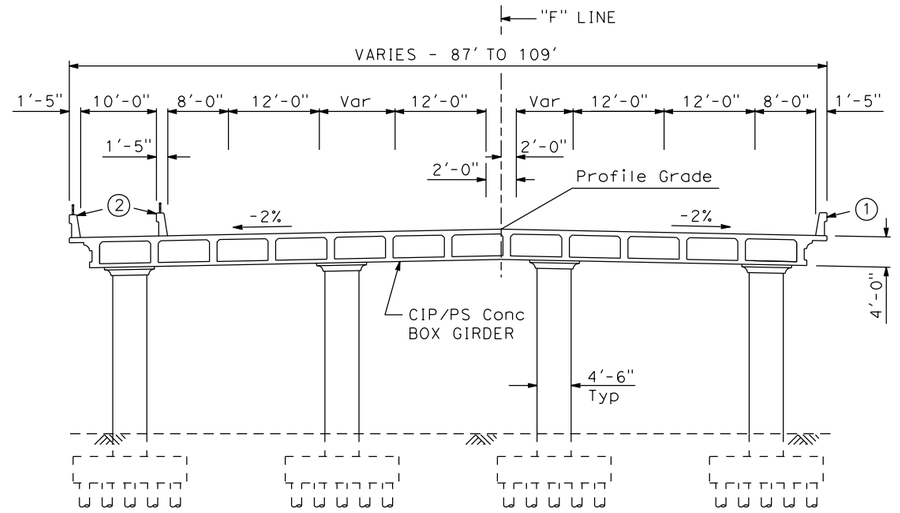
1" = 20'

*18'-2" minimum vertical clearance (FS)



PLAN

1" = 20'



TYPICAL SECTION

1" = 10'

LEGEND

(1) Denotes Concrete Barrier Type 732

(2) Denotes Concrete Barrier Type 732 with Tubular Hand Railing

Point of minimum vertical clearance

CURVE DATA

(A)	(B)	(C)
R = 4026.01'	R = 330.00'	R = 300.00'
△ = 27°34'39"	△ = 18°51'32"	△ = 32°22'00"
T = 1937.79'	T = 108.62'	T = 169.47'
L = 988.05'	L = 54.81'	L = 87.06'

DESIGN OVERSIGHT	DESIGN	BY T. Osterkamp	CHECKED	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE		PREPARED FOR THE CITY OF YUBA CITY DEPARTMENT OF PUBLIC WORKS	T. Osterkamp PROJECT ENGINEER	BRIDGE NO. 18C-0055	2ND STREET OVERCROSSING
SIGN OFF DATE	DETAILS	BY C. Houghton	CHECKED	LAYOUT	BY	CHECKED			POST MILES	GENERAL PLAN
	QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY	PLANS AND SPECS COMPARED				

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: - PROJECT NUMBER & PHASE: - CONTRACT NO.: X

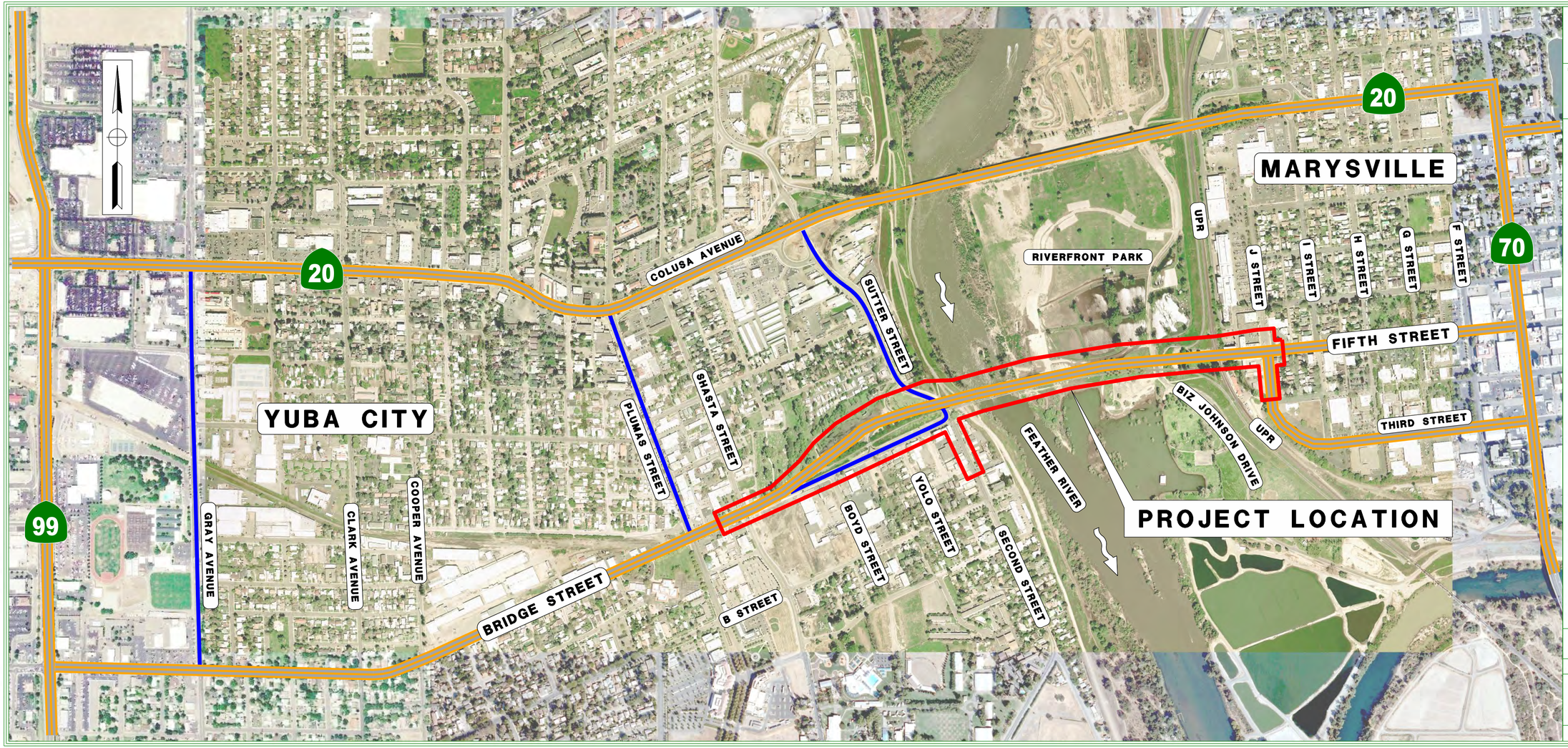
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
X					1	-

FILE => J:\1858_5th_St_BR\517\2nd_St\1858GP4.dgn

USERNAME => untitled DATE PLOTTED => 5/24/2013 TIME PLOTTED => 4:05:51 PM

ATTACHMENT F – CORRIDOR SYSTEM EXHIBIT



YUBA-SUTTER REGIONAL CORRIDOR EXHIBIT

PROJECT

FIFTH STREET BRIDGE REPLACEMENT

LEGEND

- REGIONAL CONNECTIVITY
- LOCAL CONNECTIVITY
- PROJECT LIMITS

SCALE

0 200 400 600 800 1000

ATTACHMENT F

DATE: MARCH 2013

PREPARED BY:
DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA. 95630
(916) 858-0642

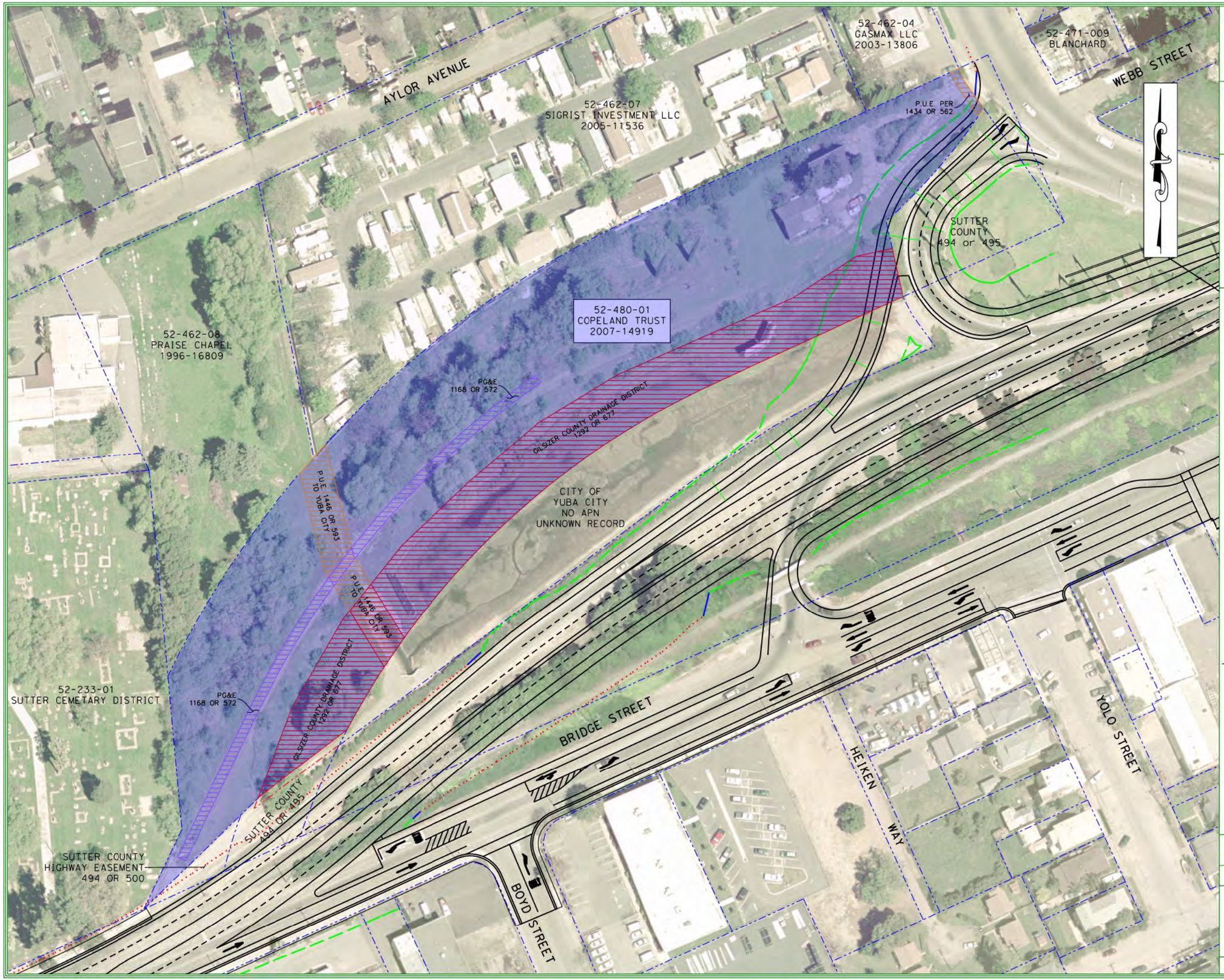
...\F_1858_Corridor_Exhibit.dgn

ATTACHMENT G – RIGHT OF WAY EXHIBITS

CITY OF YUBA CITY
RIGHT OF WAY EXHIBITS
52-480-01

PROJECT

5TH STREET BRIDGE REPLACEMENT PROJECT

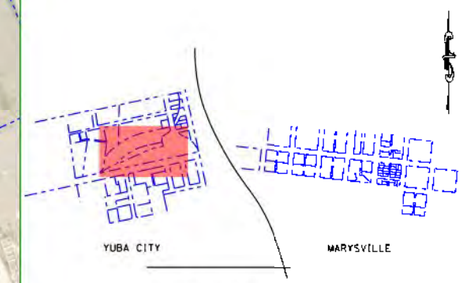


LEGEND

- PARCEL BOUNDARY
- PG&E EASEMENT
- PUBLIC USE EASEMENT
- GILSIZER DRAINAGE EASEMENT

PARCEL AREA

- TOTAL: 4.82 ACRES
- PG&E EASEMENT:
- PUBLIC USE EASEMENT:
- GILSIZER DRAINAGE EASEMENT:



LOCATION MAP
NO SCALE

ATTACHMENT G1

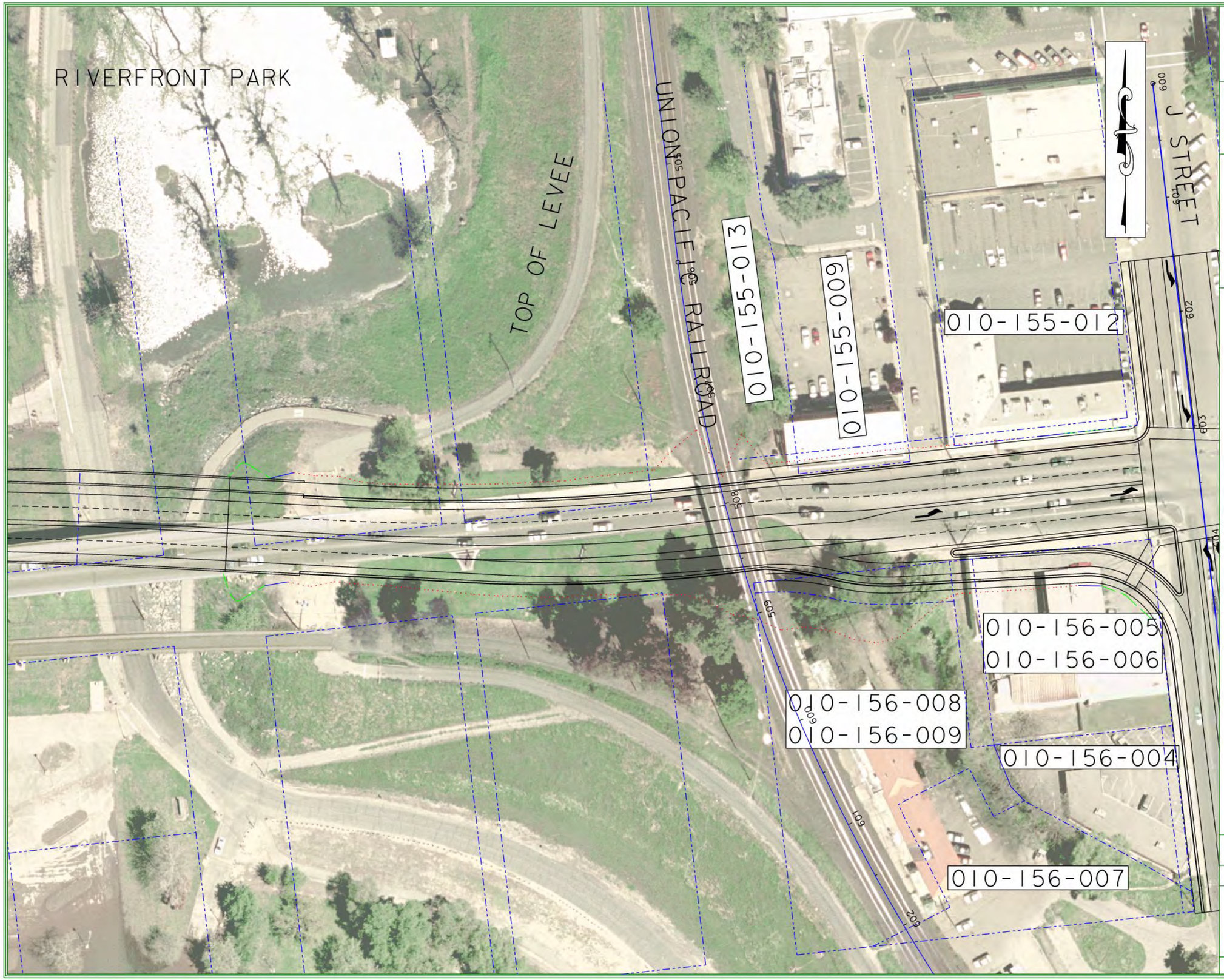
SCALE: 1" = 100'

DATE: MARCH 2013

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA, 95630
(916)858-0642

...\G1_ROW_Gilsizer_Slough.dgn



CITY OF YUBA CITY
RIGHT OF WAY EXHIBITS
APN 010-156-007, 010-156-008
010-156-009, 010-156-013

PROJECT

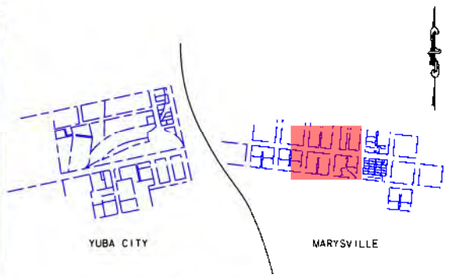
5TH STREET BRIDGE REPLACEMENT PROJECT

LEGEND

PARCEL BOUNDARY

PARCEL AREA

TOTAL: TBD



LOCATION MAP
NO SCALE

ATTACHMENT G2

SCALE: 1"=80'

DATE: MARCH 2013

PREPARED BY:

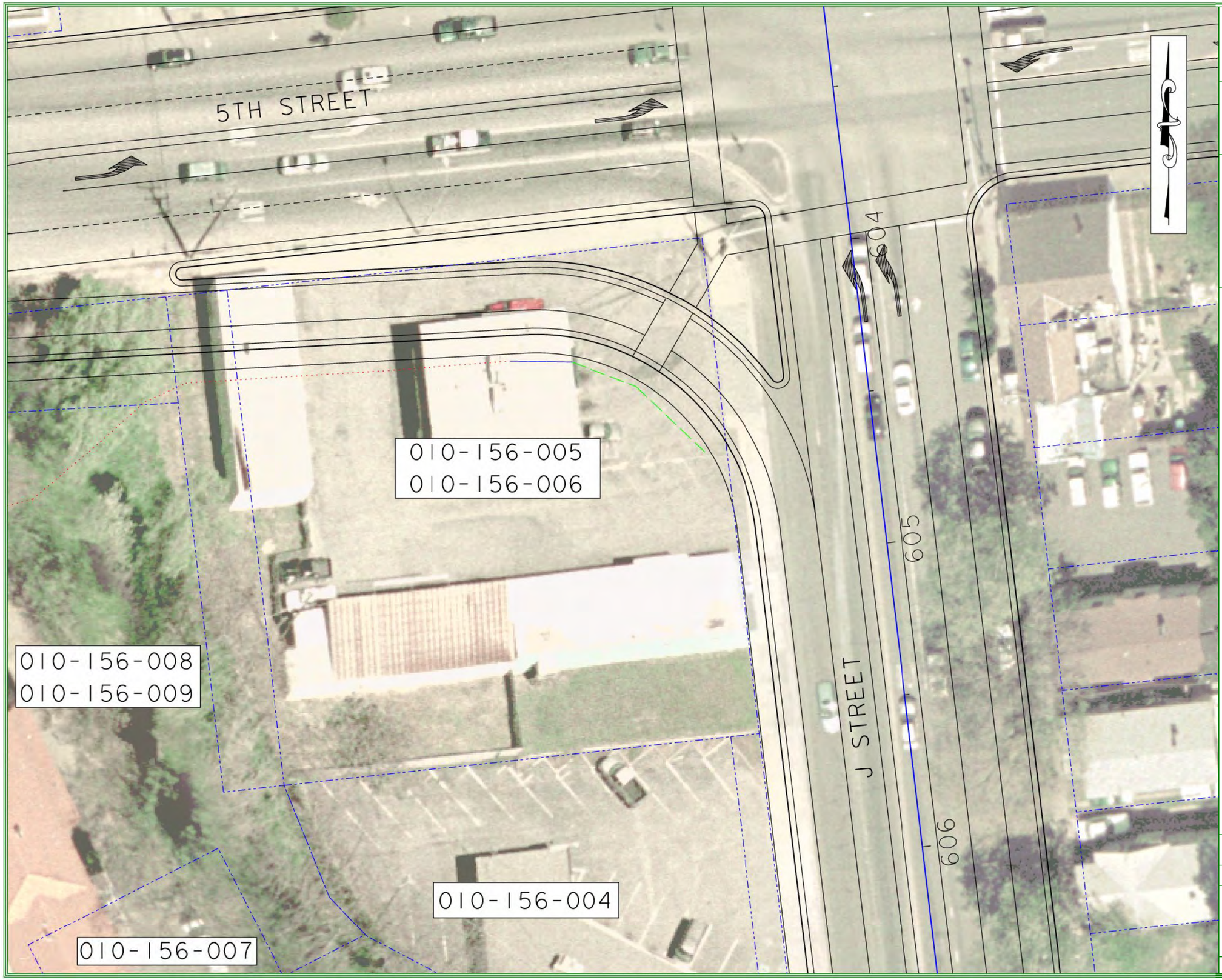
DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA, 95630
(916)858-0642

...\PSR_PR\G2_ROW_010-UPR.dgn

CITY OF YUBA CITY
RIGHT OF WAY EXHIBITS
APN 010-156-005, 010-156-006

PROJECT

5TH STREET BRIDGE REPLACEMENT PROJECT



LEGEND

PARCEL BOUNDARY

PARCEL AREA

TOTAL: 0.58 ACRES

LOCATION MAP

NO SCALE

ATTACHMENT G3

SCALE: 1"=30'

DATE: MARCH 2013

PREPARED BY:

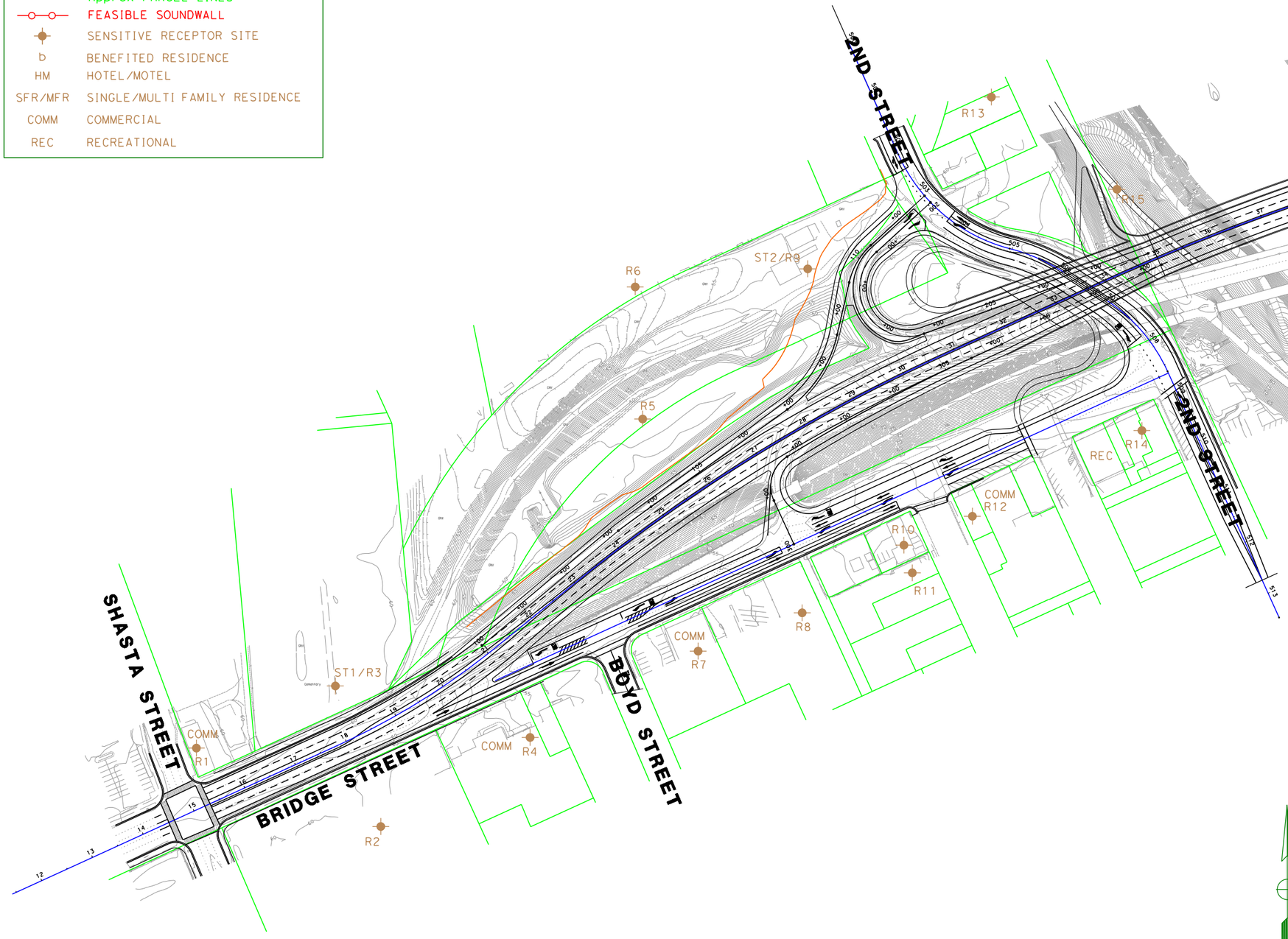
DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA, 95630
(916)858-0642

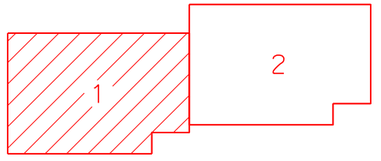
...\G3_ROW_010-156-005_006.dgn

ATTACHMENT H – NOISE BARRIER EXHIBITS

LEGEND

———	R/W
- - - - -	PERMANENT EASEMENT
· —— ——	Temp CONSTRUCTION EASEMENT
———	Approx PARCEL LINES
—o—o—	FEASIBLE SOUNDWALL
✦	SENSITIVE RECEPTOR SITE
b	BENEFITED RESIDENCE
HM	HOTEL/MOTEL
SFR/MFR	SINGLE/MULTI FAMILY RESIDENCE
COMM	COMMERCIAL
REC	RECREATIONAL





5TH STREET BRIDGE REPLACEMENT PROJECT

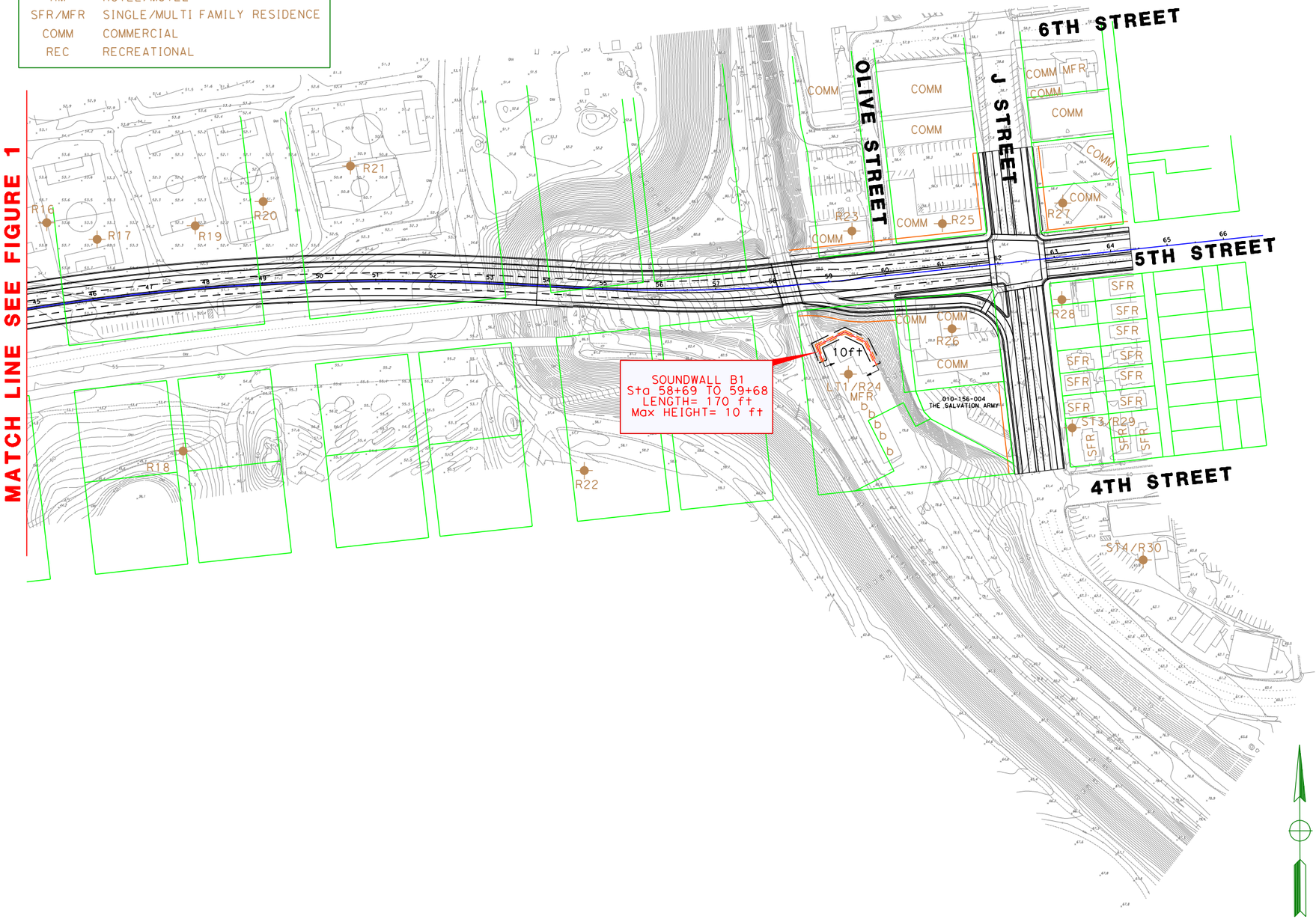
NOISE MEASUREMENT SITES AND MODELED RECEPTORS

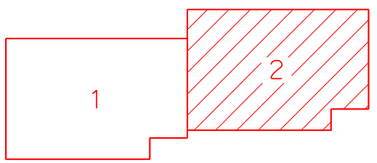
SCALE 1"=200'

FIGURE 1 of 2

LEGEND

———	R/W
- - - - -	PERMANENT EASEMENT
· — —	Temp CONSTRUCTION EASEMENT
———	Approx PARCEL LINES
—o—o—	FEASIBLE SOUNDWALL
✦	SENSITIVE RECEPTOR SITE
b	BENEFITED RESIDENCE
HM	HOTEL/MOTEL
SFR/MFR	SINGLE/MULTI FAMILY RESIDENCE
COMM	COMMERCIAL
REC	RECREATIONAL





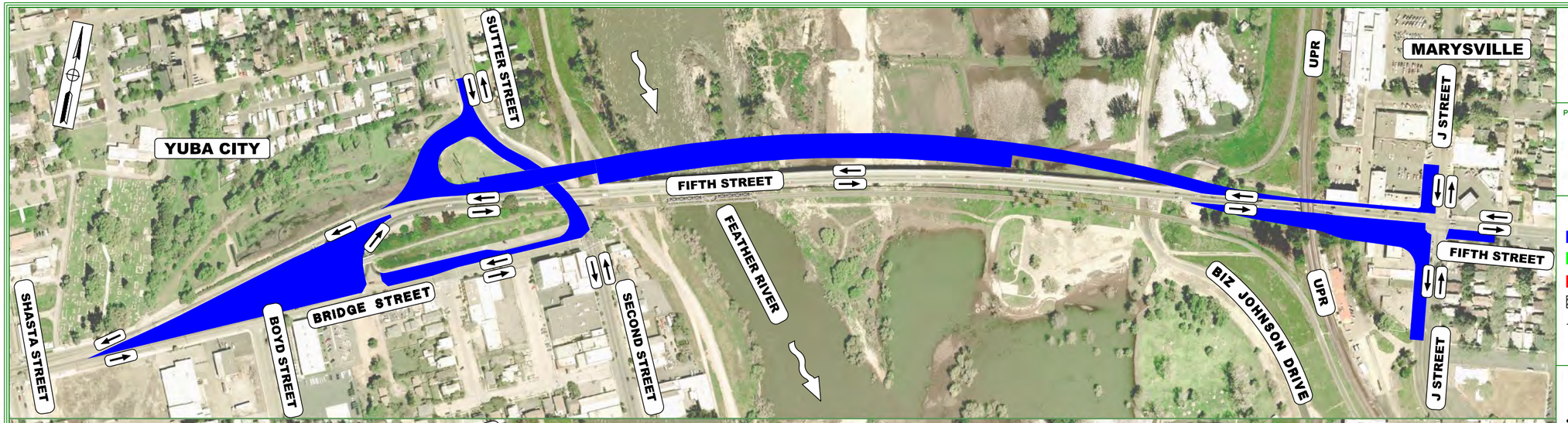
5TH STREET BRIDGE REPLACEMENT PROJECT

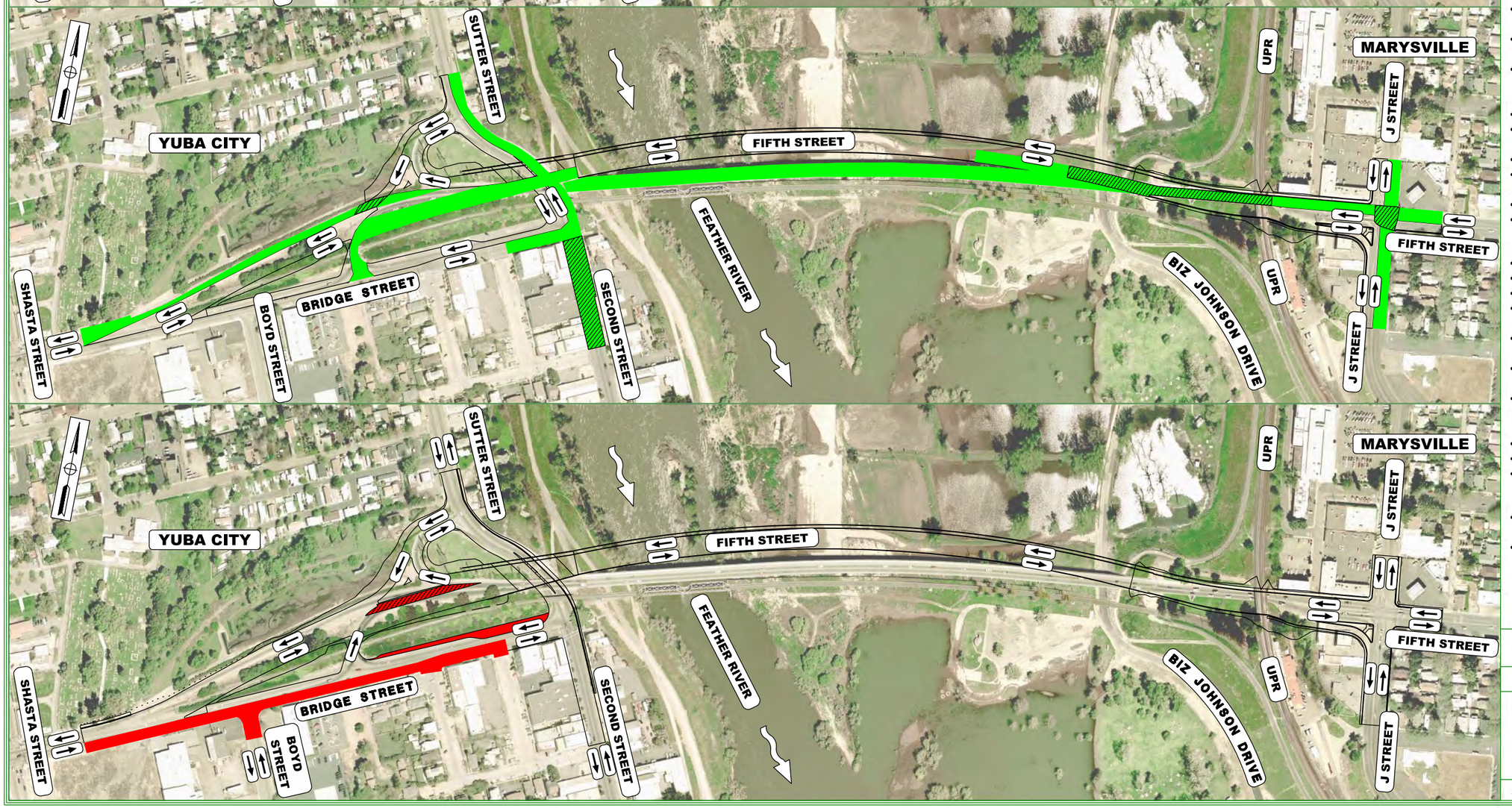
NOISE MEASUREMENT SITES AND MODELED RECEPTORS

SCALE 1"=200'

FIGURE 2 of 2

ATTACHMENT I – STAGE CONSTRUCTION EXHIBIT





STAGE CONSTRUCTION EXHIBIT

PROJECT

FIFTH STREET BRIDGE REPLACEMENT

LEGEND

- 🟦 STAGE 1 CONSTRUCITON
- 🟩 STAGE 2 CONSTRUCTION
- 🟥 STAGE 3 CONSTRUCTION
- ▨ CONSTRUCTION (TRAFFIC CONTROL)
- — BUILT IN PREVIOUS STAGE
- ← DIRECTION OF TRAFFIC FLOW

CONSTRUCTION NOTES

STAGE 1 CONSTRUCTION
- CONSTRUCT FRAMES 1 & 2 AND NORTH HALF OF FRAME 3 OF FIFTH STREET BRIDGE
- CONSTRUCT NORTH HALF OF SECOND STREET OVERCROSSING
- CONSTRUCT PORTIONS OF FIFTH STREET, J STREET, SUTTER & SECOND STREET, AND BRIDGE STREET
- KEEP EXISTING BRIDGE OPEN
- KEEP FIFTH STREET, BRIDGE STREET, SUTTER & SECOND STREET, AND J STREET OPEN
- CLOSE WESTBOUND OFF RAMP TO SUTTER STREET
- DETOUR FOR OFF RAMP TO USE SHASTA OR PLUMAS
- DEMOLISH EXISTING WESTBOUND OFF RAMP
- CONSTRUCT NEW WESTBOUND ON AND OFF RAMPS

STAGE 2 CONSTRUCTION
- SHIFT TRAFFIC TO NEW BRIDGE
- OPEN NEW WESTBOUND OFF RAMP
- DEMOLISH EXISTING FIFTH STREET BRIDGE
- DEMOLISH EXISTING SECOND STREET OVERCROSSING AND UPR UNDERPASS
- CONSTRUCT SOUTH HALF OF FRAME 3 OF FIFTH STREET BRIDGE
- CONSTRUCT SOUTH HALF OF SECOND STREET OVERCROSSING
- CONSTRUCT REMAINING PORTIONS OF J STREET, SUTTER & SECOND STREET UNDER TRAFFIC CONTROL
- CLOSE EXISTING EASTBOUND ON RAMP
- DEMOLISH EXISTING EASTBOUND ON RAMP
- CONSTRUCT NEW EASTBOUND ON RAMP

STAGE 3 CONSTRUCTION
- CONSTRUCT REMAINING PORTION OF FIFTH STREET UNDER TRAFFIC CONTROL
- CONSTRUCT REMAINING PORTION OF BRIDGE STREET

ATTACHMENT I

SCALE: NO SCALE

DATE: MARCH 2013

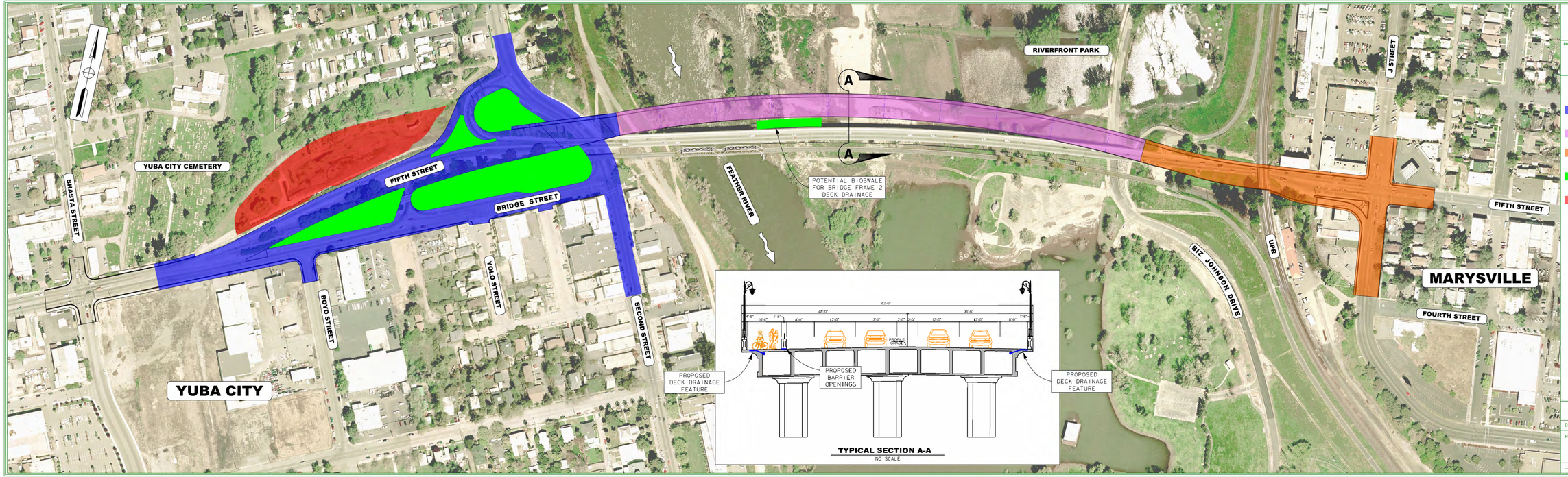
PREPARED BY:

DOKKEN ENGINEERING

110 Blue Ravine Road, Suite 200
Folsom, CA. 95630
(916)858-0642

...\PSR_PR\1_1858_Staging.dgn

ATTACHMENT J – CONCEPTUAL DRAINAGE EXHIBIT



CONCEPTUAL DRAINAGE PLAN

PROJECT

FIFTH STREET BRIDGE REPLACEMENT

LEGEND

- YUBA CITY STORM DRAIN SYSTEM
- BRIDGE DECK DRAINAGE
- MARYSVILLE STORM DRAIN SYSTEM
- POTENTIAL DRAINAGE FEATURE
- EXISTING GILSIZER DRAINAGE BASIN

NOTES

1. EXISTING STORM DRAINAGE SYSTEMS TO BE USED OR UPGRADED DURING PS&E.
2. DECK DRAINAGE FROM FRAME 1 TO FLOW TO YUBA CITY STORM DRAIN SYSTEM.
3. DECK DRAINAGE FROM FRAME 3 TO FLOW TO MARYSVILLE STORM DRAIN SYSTEM.
4. DECK DRAINAGE IN FRAME 2 DRAINS TO BIOSWALE IN RIVERFRONT PARK.

ATTACHMENT J

DATE: MARCH 2013 | SCALE: NO SCALE

PREPARED BY:

DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200
Folsom, CA 95630
(916) 858-0642

...\J_Conceptual Drainage_Exhibit.dgn

ATTACHMENT K – RAILROAD EXHIBIT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
					X

REGISTERED CIVIL ENGINEER DATE

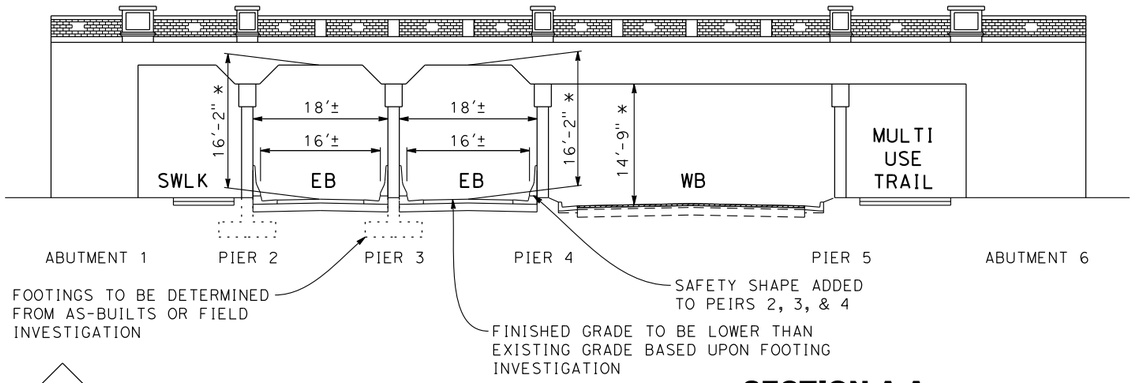
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NATHAN J. DONNELLY No. 64459 Exp. 6/30/11 CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD, SUITE 200
FOLSOM, CALIFORNIA 95630

SACRAMENTO SUB., MILE POST 178.90
CPUC #004-178.90B
DOT #834947R



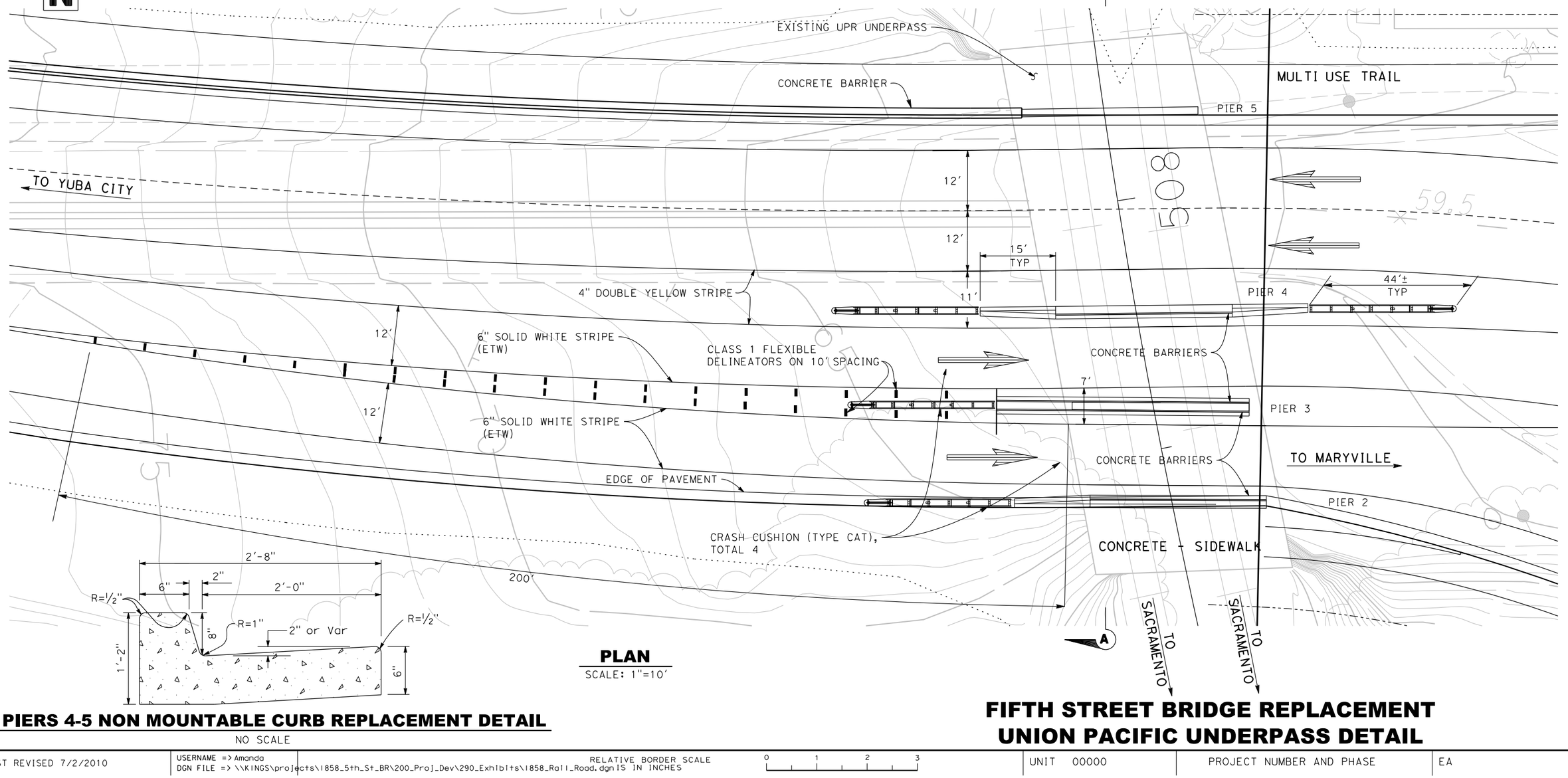
SECTION A-A

SCALE: 1"=10'

LEGEND

COLD PLANE (GRIND) AC 3" AND PLACE HMA (TYPE A) 3"

* VERTICAL CLEARANCE NOT TO BE REDUCED



PLAN

SCALE: 1"=10'

PIERS 4-5 NON MOUNTABLE CURB REPLACEMENT DETAIL

NO SCALE

FIFTH STREET BRIDGE REPLACEMENT
UNION PACIFIC UNDERPASS DETAIL

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION | DATE PLOTTED => 3/7/2013
00-00-00 | TIME PLOTTED => 11:53:24 AM

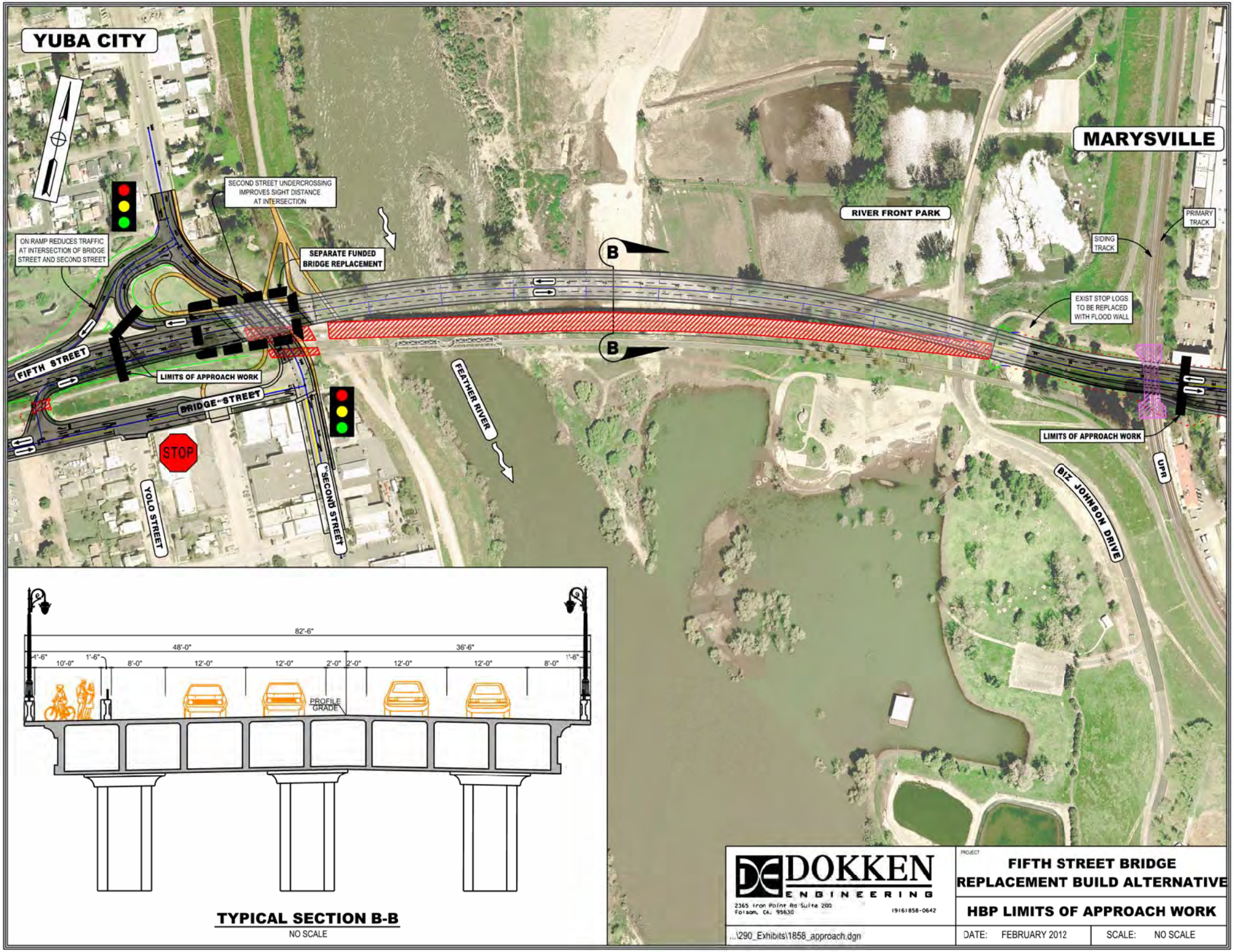
BORDER LAST REVISED 7/2/2010

USERNAME => Amanda
DGN FILE => \\KINGS\projects\1858_5th_St_BR\200_Proj_Dev\290_Exhibits\1858_Rail_Road.dgn IS IN INCHES

RELATIVE BORDER SCALE 0 1 2 3

UNIT 00000 | PROJECT NUMBER AND PHASE | EA

ATTACHMENT L – HBP FUNDING LIMITS EXHIBITS



TYPICAL SECTION B-B

NO SCALE

DOKKEN ENGINEERING

2365 Iron Point Rd Suite 200
Folsom, CA. 95630
(916)858-0642

PROJECT

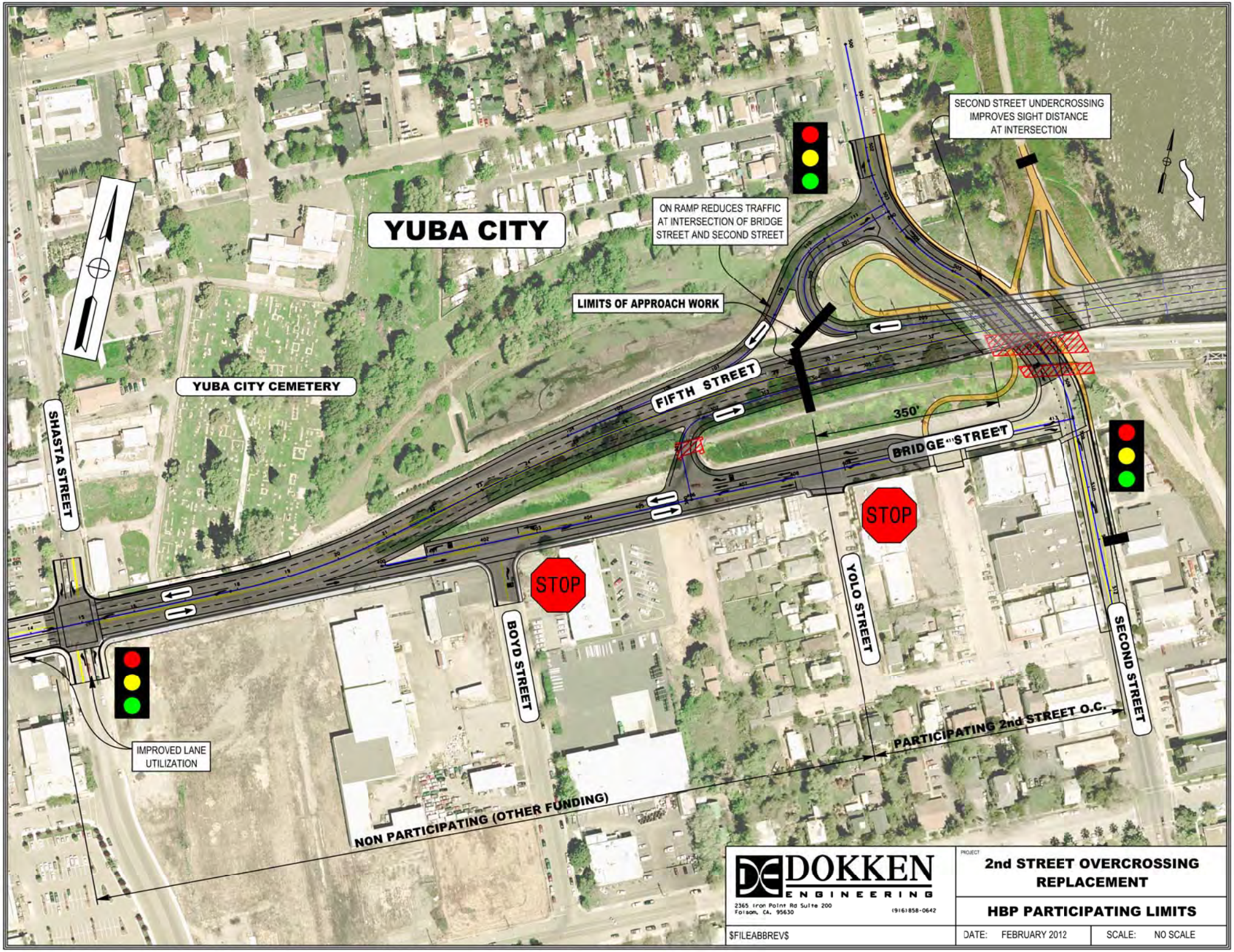
FIFTH STREET BRIDGE REPLACEMENT BUILD ALTERNATIVE

HBP LIMITS OF APPROACH WORK

...\290_Exhibits\1858_approach.dgn

DATE: FEBRUARY 2012

SCALE: NO SCALE



DOKKEN ENGINEERING
2365 Iron Point Rd Suite 200
Folsom, CA. 95630
(916)858-0642

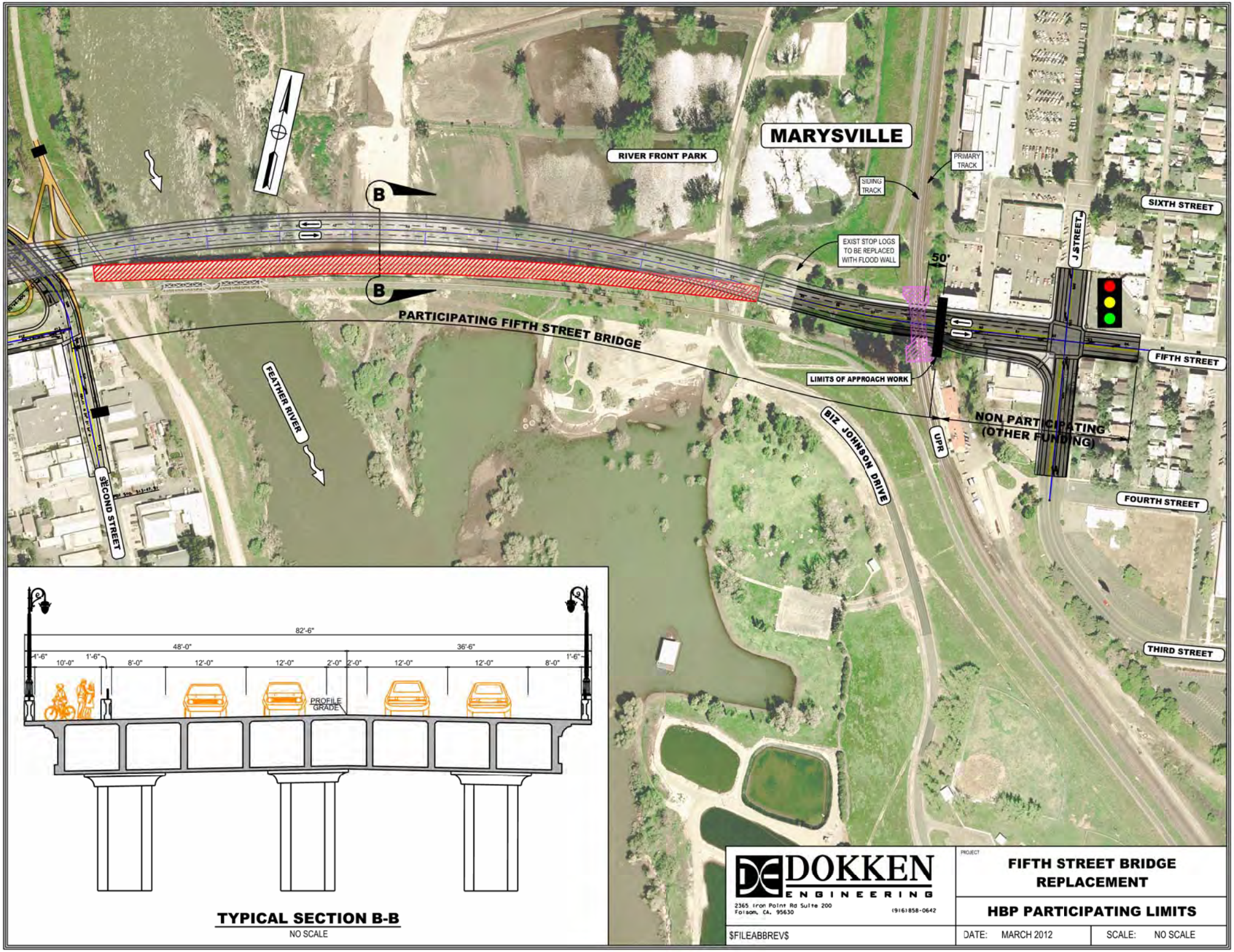
PROJECT
2nd STREET OVERCROSSING REPLACEMENT

HBP PARTICIPATING LIMITS

$FILEABBREV$

DATE: FEBRUARY 2012

SCALE: NO SCALE



TYPICAL SECTION B-B
NO SCALE

DOKKEN ENGINEERING
2365 Iron Point Rd Suite 200
Folsom, CA. 95630
(916)858-0642

PROJECT
FIFTH STREET BRIDGE REPLACEMENT

HBP PARTICIPATING LIMITS

$FILEABBREV$

DATE: MARCH 2012

SCALE: NO SCALE

ATTACHMENT M – COST ESTIMATE

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

District-County-Route	03-SUT/YUB-0
PM	N/A
EA	N/A
Program Code	BHLS-5163(025)

PROJECT DESCRIPTION: 5th Street Bridge Replacement Project
Bridge No. 18C0012 & 18C0055

Limits: Along 5th Street from Bridge Street and Shasta Street in Yuba City to J Street in Marysville, including portions of Bridge Street and 2nd Street in Yuba City and portions of J Street, 3rd Street, and River Front Park in Marysville.

Proposed Improvement (Scope): The City of Yuba City, in cooperation with the City of Marysville, proposes to replace the 5th Street Bridge (Bridge # 18C-0012) over the Feather River and improve approach roadways to the bridge. The 5th Street Bridge is a major arterial connector between the two cities serving local, commercial, commuter, pedestrian, and bicycle traffic.

Alternate: **Build Alternative: Alternative 1: 4-Lane North Alignment, under UPR**

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$	7,246,800
TOTAL STRUCTURE ITEMS	$	39,918,500
SUBTOTAL CONSTRUCTION COSTS	$	47,165,300
TOTAL RIGHT OF WAY ITEMS	$	222,500
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	47,387,800

Reviewed by Project Manager
Dokken Engineering

Signature

Approved by Project Engineer
Dokken Engineering

Signature

Phone No. 916-858-0642 Date April 03, 2013

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

District-County-Route	03-SUT/YUB-0
KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	11,000	CY	$35	$385,000	
Imported Borrow	22,000	CY	$35	$770,000	
Clearing & Grubbing	1	LS	$15,000	$15,000	
Develop Water Supply	1	LS	$15,000	$15,000	
				Subtotal Earthwork	$1,185,000

Section 2 Pavement Structural Section					
PCC Sidewalk	9,984	SF	$15	$149,760	
PCC Curb&Gutter (A2-150)	1,454	LF	$35	$50,890	
HMA (Type A) Roadway	3,735	TON	$110	$410,850	
HMA (Type A) Trail	316	TON	$110	$34,760	
Aggregate Base (CL2) Roadway	6,997	CY	$65	$454,805	
Aggregate Base (CL2) Sidewalk	123	CY	$65	$7,995	
Aggregate Base (CL2) Trail	242	CY	$65	$15,730	
Aggregate Subbase					
Pavement Reinforcing Fabric					
				Subtotal Pavement Structural Section	$1,124,790

Section 3 Drainage					
Large Drainage Facilities					
Storm Drains (RCBs)					
Floodwalls	1	LS	$40,000	$40,000	
Project Drainage					
(Culverts, Rock Slope Protection,	1	LS	$50,000	$50,000	
Flared End Sections, Inlets,					
Grates, etc.)					
				Subtotal Drainage	$90,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	3,250	SF	$80	$260,000	
Barriers					
Guardrail	200	LF	$80	$16,000	
Highway Planting	1	LS	$50,000	$50,000	
Storm Water Pollution Prevention Plan	1	LS	$8,000	$8,000	
Erosion Control (Type D)	322,000	SF	$3	$966,000	
Water Pollution Control	1	LS	$50,000	$50,000	
Environmental Mitigation	1	LS	$409,000	$409,000	
Resident Engineer Office Space	1	LS	$40,000	$40,000	
Construction Staking	1	LS	$100,000	$100,000	
Temporary Railing (Type K)	2,100	LF	$20	$42,000	
Temporary Crash Cushion Modules	70	EA	$300	$21,000	$1,962,000
				Subtotal Speciality Items	

Section 5 Traffic Items					
Lighting	20	EA	$10,000	$200,000	
Traffic Delineation Items	1	LS	$12,000	$12,000	
Roadside Signs	1	LS	$6,000	$6,000	
Traffic Control Systems	1	LS	$285,000	$285,000	
Maintain Traffic	1	LS	$25,000	$25,000	
Traffic Management Plan	1	LS	$40,000	$40,000	
					$568,000
				Subtotal Traffic Items	
					$4,929,800
				SUBTOTAL SECTIONS 1-5	

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

KP(PM) N/A
EA N/A
Program Code BHLS-5163(025)

Section 6 Minor Items

Subtotal Sections 1-5	$4,929,800	x	5%	$246,490

TOTAL MINOR ITEMS $246,500

Section 7 Roadway Mobilization

Subtotal Sections 1-5	$4,929,800			
Minor Items	$246,500			
Sum	$5,176,300	x	10%	$517,630

TOTAL ROADWAY MOBILIZATION $517,600

Section 8 Road Additions

Supplemental

Subtotal Sections 1-5	$4,929,800			
Minor Items	$246,500			
Sum	$5,176,300	x	10%	$517,630

Contingencies *

Subtotal Sections 1-5	$4,929,800			
Minor Items	$246,500			
Sum	$5,176,300	x	20%	$1,035,260

TOTAL ROADWAY ADDITIONS $1,552,900

TOTAL ROADWAY ITEMS $7,246,800
(Total of Sections 1-8)

ESTIMATE PREPARED BY
DOKKEN ENGINEERING Megan Carter (Print Name) PHONE # 916-858-0642 DATE April 03, 2013

* Use appropriate percentage per Chapter 3-50 of Project Development Procedures Manual: PSR 25%, Draft PR 20%, PR 15%.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

District-County-Route	03-SUT/YUB-0
KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

II. STRUCTURES ITEMS

Bridge Name	5th Street Overcrossing	2nd Street Overcrossing		
Structure Type	CIP Box Girder	CIP Box Girder		
Width (out to out) - (ft)	82.5	98		
Span Length - (ft)	1858	198		
Total Area - (sf)	153,285	19,404		
Footing Type (pile/spread)				
Cost Per sf (incl. 10% mobilization and 25% contingency)	$230.00	$230.00		
Total Cost for Structure	$35,255,550	$4,462,920		

SUBTOTAL STRUCTURES ITEMS	$39,718,500

Railroad Related Costs		$100,000	$100,000
Remove Existing Bridge (2 RR Bridges)		$100,000	$100,000
Bridge Railing Replacement			
	SUBTOTAL RELATED ITEMS		$200,000

TOTAL STRUCTURES ITEMS	$39,918,500

COMMENTS:

This includes both bridge replacements.

ESTIMATE PREPARED BY

DOKKEN ENGRNG Megan Carter (Print Name) PHONE # 916-858-0642 DATE April 03, 2013

(If appropriate, attach additional pages and backup)

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
HIGHWAY BRIDGE PROGRAM (PARTICIPATING)

District-County-Route	03-SUT/YUB-0
KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

III. RIGHT OF WAY

APN	Impact	Area (SF)	Unit Cost ($)	Total ($)
010-156-008	Partial In Fee	650	$10.00	$6,500.00

Acquistion Total	$6,500.00
Utility Relocation (Project share)	$151,200
Right of Way Support	$64,800

TOTAL RIGHT OF WAY $222,500

CONSTRUCTION CONTRACT WORK

COMMENTS

ESTIMATE PREPARED BY

DOKKEN ENGINEERING Megan Carter (Print Name) PHONE # 916-858-0642 DATE April 03, 2013

(If appropriate, attach additional pages and backup.)

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

District-County-Route	03-SUT/YUB-0
PM	N/A
EA	N/A
Program Code	BHLS-5163(025)

PROJECT DESCRIPTION: 5th Street Bridge Replacement Project
Bridge No. 18C0012 & 18C0055

Limits: Along 5th Street from Bridge Street and Shasta Street in Yuba City to J Street in Marysville, including portions of Bridge Street and 2nd Street in Yuba City and portions of J Street, 3rd Street, and River Front Park in Marysville.

Proposed Improvement (Scope): The City of Yuba City, in cooperation with the City of Marysville, proposes to replace the 5th Street Bridge (Bridge # 18C-0012) over the Feather River and improve approach roadways to the bridge. The 5th Street Bridge is a major arterial connector between the two cities serving local, commercial, commuter, pedestrian, and bicycle traffic.

Alternate: **Build Alternative: Alternative 1: 4-Lane North Alignment, under UPR**

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$	11,033,100
TOTAL STRUCTURE ITEMS	$	
SUBTOTAL CONSTRUCTION COSTS	$	11,033,100
TOTAL RIGHT OF WAY ITEMS	$	2,133,100
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	13,166,200

Reviewed by Project Manager
Dokken Engineering
Signature

Approved by Project Engineer
Dokken Engineering
Signature

Phone No. 916-858-0642 Date April 03, 2013

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

District-County-Route	03-SUT/YUB-0
KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	19,000	CY	$35	$665,000	
Imported Borrow	18,000	CY	$35	$630,000	
Clearing & Grubbing	1	LS	$15,000	$15,000	
Obliterate Roadway	12,200	SF	$1	$12,200	
				Subtotal Earthwork	$1,322,200
Section 2 Pavement Structural Section					
PCC Sidewalk	33,879	SF	$15	$508,185	
PCC Curb&Gutter (A2-150)	4,697	LF	$35	$164,395	
HMA (Type A) Roadway	14,213	TON	$110	$1,563,430	
HMA (Type A) Trail	70	TON	$110	$7,700	
Aggregate Base (CL2) Roadway	26,622	CY	$65	$1,730,430	
Aggregate Base (CL2) Sidewalk	418	CY	$65	$27,170	
Aggregate Base (CL2) Trail	54	CY	$65	$3,510	
Aggregate Subbase					
Pavement Reinforcing Fabric					
				Subtotal Pavement Structural Section	$4,004,820
Section 3 Drainage					
Large Drainage Facilities	1	LS	$100,000	$100,000	
Storm Drains (RCBs)					
Project Drainage					
(Culverts, Rock Slope Protection,	1	LS	$50,000	$50,000	
Flared End Sections, Inlets,					
Grates, etc.)					
				Subtotal Drainage	$150,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	1,150	SF	$80	$92,000	
Barriers	250	LF	$200	$50,000	
Guardrail					
Noise Barriers	1,700	SF	$40	$68,000	
Highway Planting	1	LS	$50,000	$50,000	
Irrigation Modification	1	LS	$50,000	$50,000	
Erosion Control (Type D)	68,500	SF	$3	$205,500	
Water Pollution Control	1	LS	$50,000	$50,000	
Construction Staking	1	LS	$100,000	$100,000	
Temporary Railing (Type K)	900	LF	$20	$18,000	
Temporary Crash Cushion Modules	30	EA	$300	$9,000	$692,500
				Subtotal Speciality Items	

Section 5 Traffic Items					
Lighting	20	EA	$10,000	$200,000	
Traffic Delineation Items	1	LS	$20,000	$20,000	
Traffic Signals (New)	2	EA	$200,000	$400,000	
Traffic Signals (Modify)	2	EA	$200,000	$400,000	
Roadside Signs	1	LS	$6,000	$6,000	
Traffic Control Systems	1	LS	$285,000	$285,000	
Maintain Traffic	1	LS	$25,000	$25,000	
					$1,336,000
				Subtotal Traffic Items	
					$7,505,500
				SUBTOTAL SECTIONS 1-5	

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

KP(PM) N/A
EA N/A
Program Code BHLS-5163(025)

Section 6 Minor Items

Subtotal Sections 1-5	$7,505,500	x	5%	$375,275	
			TOTAL MINOR ITEMS		$375,300

Section 7 Roadway Mobilization

Subtotal Sections 1-5	$7,505,500				
Minor Items	$375,300				
Sum	$7,880,800	x	10%	$788,080	
			TOTAL ROADWAY MOBILIZATION		$788,100

Section 8 Road Additions

Supplemental

Subtotal Sections 1-5	$7,505,500				
Minor Items	$375,300				
Sum	$7,880,800	x	10%	$788,080	

Contingencies *

Subtotal Sections 1-5	$7,505,500				
Minor Items	$375,300				
Sum	$7,880,800	x	20%	$1,576,160	
			TOTAL ROADWAY ADDITIONS		$2,364,200
			TOTAL ROADWAY ITEMS		$11,033,100
			(Total of Sections 1-8)		

ESTIMATE PREPARED BY

DOKKEN ENGINEERING Megan Carter (Print Name) PHONE # 916-858-0642 DATE April 03, 2013

* Use appropriate percentage per Chapter 3-50 of Project Development Procedures Manual: PSR 25%, Draft PR 20%, PR 15%.

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

District-County-Route 03-SUT/YUB-0
KP(PM) N/A
EA N/A
Program Code BHLS-5163(025)

II. STRUCTURES ITEMS

Bridge Name				
Structure Type				
Width (out to out) - (ft)				
Span Length - (ft)				
Total Area - (sf)				
Footing Type (pile/spread)				
Cost Per sf (incl. 10% mobilization and 25% contingency)				
Total Cost for Structure				

SUBTOTAL STRUCTURES ITEMS

Railroad Related Costs		
Remove Existing Bridge (2 RR Bridges)		
Bridge Railing Replacement		
SUBTOTAL RELATED ITEMS		

TOTAL STRUCTURES ITEMS

COMMENTS:

ESTIMATE PREPARED BY

DOKKEN ENGRNG Megan Carter (Print Name) PHONE # 916-858-0642 DATE April 03, 2013

(If appropriate, attach additional pages and backup)

PRELIMINARY PROJECT COST ESTIMATE SUMMARY
NON-PARTICIPATING

District-County-Route	03-SUT/YUB-0
KP(PM)	N/A
EA	N/A
Program Code	BHLS-5163(025)

III. RIGHT OF WAY

APN	Impact	Area (SF)	Unit Cost ($)	Total ($)
52-480-01	Partial In Fee	51,500	$10.00	$515,000.00
010-156-008	Partial In Fee	3,411	$10.00	$34,110.00
010-156-004	Full In Fee			$500,000.00
010-156-005	Full In Fee			$500,000.00

Acquistion Total (From parcels above)	$1,549,110
Relocation Assistance (2 parcels)	$200,000
Utility Relocation (Project share)	$268,800
Right of Way Support	$115,200

TOTAL RIGHT OF WAY $2,133,100

CONSTRUCTION CONTRACT WORK

COMMENTS

For each parcel that requires full acquistion the budgeted cost is $500,000 which does not include relocation assistance.
Relocation assistance is budgeted for $100,000 for each parcel.

ESTIMATE PREPARED BY

DOKKEN ENGINEERING | Megan Carter (Print Name) | PHONE # 916-858-0642 | DATE April 03, 2013

(If appropriate, attach additional pages and backup.)

	GENERAL PLAN ESTIMATE	X	ADVANCE PLANNING ESTIMATE

Revised - December 3, 2007

RCVD BY: **IN EST:**

REPLACEMENT, ALT.1 **OUT EST:**

BRIDGE: 5th Street Bridge over the Feather River **BR. No.:** 18C-0012 (Exist) **DISTRICT:** 03

TYPE: CAST-IN-PLACE PRESTRESSED CONCRETE BOX **RTE:**

CU: **CO:** SUTTER/YUBA

EA: **PM:**

LENGTH: 1,858.00 **WIDTH:** 82.50 **AREA (SF)=** 153,285

DESIGN SECTION: Dokken

 # OF STRUCTURES IN PROJECT : 01 **EST. NO.**

PRICES BY : T. Osterkamp **COST INDEX:** 2010

PRICES CHECKED BY : M. Maechler **DATE:** 3/19/2013

QUANTITIES BY: T. Osterkamp **DATE:** 3/19/2013

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
157550	BRIDGE REMOVAL (PORTION)		LS	1	$1,100,000.00	$1,100,000.00
192003	STRUCTURE EXCAVATION (BRIDGE)		CY	500	$100.00	$50,000.00
193003	STRUCTURE BACKFILL (BRIDGE)		CY	410	$75.00	$30,750.00
490622	120" CAST-IN-DRILLED-HOLE CONCRETE PILING		LF	2,700	$1,800.00	$4,860,000.00
490739	DRIVE PILE (CLASS 140)		EA	56	$1,500.00	$84,000.00
490738	FURNISH PILE (CLASS 140)		LF	3,360	$35.00	$117,600.00
500001	PRESTRESSING CAST-IN-PLACE CONCRETE		LS	1	$1,130,000.00	$1,130,000.00
510051	STRUCTURE CONCRETE, BRIDGE FOOTING		CY	235	$450.00	$105,750.00
510053	STRUCTURAL CONCRETE, BRIDGE		CY	15,580	$650.00	$10,127,000.00
510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)		CY	188	$650.00	$122,200.00
519095	JOINT SEAL ASSEMBLY (MR=4")		LF	170	$250.00	$42,500.00
519118	JOINT SEAL ASSEMBLY (MR=9")		LF	170	$1,200.00	$204,000.00
520102	BAR REINFORCING STEEL (BRIDGE)		LB	3,700,000	$0.80	$2,960,000.00
833088	TUBULAR HAND RAILING		LF	3,836	$55.00	$210,980.00
839720	CONCRETE BARRIER (TYPE 732)		LF	5,754	$85.00	$489,090.00

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

SUBTOTAL	$21,633,870
TIME RELATED OVERHEAD	$2,163,387
MOBILIZATION (@10 %)	$2,379,726
SUBTOTAL BRIDGE ITEMS	$26,176,983
CONTINGENCIES (@ 25%)	$6,544,246
BRIDGE TOTAL COST	$32,721,228
COST PER SQ. FOOT	$213.47
BRIDGE REMOVAL (CONTINGENCIES INCL.)	
WORK BY RAILROAD OR UTILITY FORCES	
GRAND TOTAL	$32,721,228
BUDGET ESTIMATE AS OF	**$32,720,000**

NOTES: **Prestressing Cast-in-Place Concrete: 646,000 LB**

Escalated Budget Estimate to Midpoint of Construction *

Escalation Rate per Year 1.5%

Years Beyond Midpoint	Escalated Budget Est.
1	$33,211,000
2	$33,709,000
3	$34,215,000
4	$34,728,000
5	$35,249,000

* Escalated budget estimate is provided for information only, actual construction costs may vary. Escalated budget estimates provided do not replace Departmental policy to update cost estimates annually.

[ ] GENERAL PLAN ESTIMATE [X] ADVANCE PLANNING ESTIMATE

Revised - December 3, 2007

REPLACEMENT, ALT.1

RCVD BY:

IN EST:

OUT EST:

BRIDGE: 2nd Street Bridge **BR. No.:** 18C-0055(Exist) **DISTRICT:** 03

TYPE: CAST-IN-PLACE PRESTRESSED CONCRETE BOX **RTE:**

CU: **CO:** SUTTER/YUBA

EA: **PM:**

LENGTH: 198.00 **WIDTH:** 98.00 (avg) **AREA (SF)=** 19,404

DESIGN SECTION: Dokken

 # OF STRUCTURES IN PROJECT : 01 **EST. NO.**

PRICES BY : T. Osterkamp **COST INDEX:** 2010

PRICES CHECKED BY : M. Maechler **DATE:** 3/19/2013

QUANTITIES BY: T. Osterkamp **DATE:** 3/19/2013

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
157550	BRIDGE REMOVAL (PORTION)		LS	1	$100,000.00	$100,000.00
192003	STRUCTURE EXCAVATION (BRIDGE)		CY	600	$100.00	$60,000.00
193003	STRUCTURE BACKFILL (BRIDGE)		CY	515	$75.00	$38,625.00
						$0.00
490739	DRIVE PILE (CLASS 140)		EA	156	$1,500.00	$234,000.00
490738	FURNISH PILE (CLASS 140)		LF	10,920	$35.00	$382,200.00
500001	PRESTRESSING CAST-IN-PLACE CONCRETE		LS	1	$100,200.00	$100,200.00
510051	STRUCTURE CONCRETE, BRIDGE FOOTING		CY	293	$450.00	$131,850.00
510053	STRUCTURAL CONCRETE, BRIDGE		CY	1,690	$700.00	$1,183,000.00
510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)		CY	31	$650.00	$20,150.00
519100	JOINT SEAL (MR 2")		LF	170	$250.00	$42,500.00
			LF	200	$25.00	$5,000.00
520102	BAR REINFORCING STEEL (BRIDGE)		LB	550,000	$0.80	$440,000.00
833088	TUBULAR HAND RAILING		LF	440	$55.00	$24,200.00
839720	CONCRETE BARRIER (TYPE 732)		LF	660	$85.00	$56,100.00

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

NOTES: **Prestressing Cast-in-Place Concrete: 57,300 LB**

SUBTOTAL	$2,817,825
TIME RELATED OVERHEAD	$281,783
MOBILIZATION (@10 %)	$309,961
SUBTOTAL BRIDGE ITEMS	$3,409,568
CONTINGENCIES (@ 25%)	$852,392
BRIDGE TOTAL COST	$4,261,960
COST PER SQ. FOOT	$219.64
BRIDGE REMOVAL (CONTINGENCIES INCL.)	
WORK BY RAILROAD OR UTILITY FORCES	
GRAND TOTAL	$4,261,960
BUDGET ESTIMATE AS OF 1/0/00	**$4,260,000**

Escalated Budget Estimate to Midpoint of Construction *

Escalation Rate per Year 1.5%

Years Beyond Midpoint	Escalated Budget Est.
1	$4,324,000
2	$4,389,000
3	$4,455,000
4	$4,522,000
5	$4,590,000

* Escalated budget estimate is provided for information only, actual construction costs may vary. Escalated budget estimates provided do not replace Departmental policy to update cost estimates annually.

ATTACHMENT N – INITIAL STUDY (COVER)

5th Street Bridge Replacement Project

CITY OF YUBA CITY, SUTTER COUNTY, CALIFORNIA
DISTRICT 3 – SUT – YUBA CITY
BHLS-5163(025)

Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment

Prepared by the State of California Department of Transportation and the City of Yuba City

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

Caltrans

November 2012

ATTACHMENT O – TRAFFIC REPORT (COVER)

Final Traffic Report for

5TH STREET BRIDGE REPLACEMENT PROJECT STUDY REPORT/PROJECT REPORT

Prepared for:

DOKKEN ENGINEERING

Prepared by:

FEHR & PEERS

2990 Lava Ridge Court
Suite 200
Roseville, CA 95661

September 15, 2011

ATTACHMENT P – HYDRAULIC STUDY (COVER)

03-SUT-0-CR
Bridge No. 18C0012
EA 03-0L2324

5th Street Bridge Replacement Project
Yuba City, California

Location Hydraulic Study Report
Bridge No. 18C0012

Submitted to:

CITY OF YUBA CITY
FOUNDED 1849

DOKKEN ENGINEERING

Prepared by:

WRECO

November 2012