FORM GEN. 160

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

0160-01545-0001

Date: October 18, 2011

To: City Council

From: Miguel A. Santana, City Administrative Officer

Gerry F. Miller, Chief Legislative Analyst

Subject: **SIXTH STREET VIADUCT IMPROVEMENT PROJECT – FINANCIAL PLAN**

Summary

At its September 22, 2011 meeting, the Seismic Governance Committee approved a report from the Bureau of Engineering (BOE) relative to the Financial Plan for the Sixth Street Viaduct Improvement Project (SSVIP) (Attachment). The City Administrative Officer (CAO) and Chief Legislative Analyst (CLA) reviewed the report and are now transmitting joint recommendations to enable the City to complete the demolition and replacement of the Sixth Street Viaduct over the Los Angeles River. The recommendations include: 1) authority for a total project budget of $401 million; 2) authority for the City Engineer to submit a financial plan and a letter of commitment to the state and federal government for this project; 3) a request for $98.5 million in MICLA financing to cash flow project cost reimbursements; and 4) approval of a staffing plan of up to 10 positions with resolution authority needed for four positions in 2011-12.

This joint report supercedes a prior CAO/CLA report on this subject dated August 4, 2010. (C.F. 10-1409). In August 2010, after the original report was released, Caltrans informed the City that it had legal concerns regarding the environmental review process. As a result, the City conducted further technical studies and modifications. The revised environmental process has been completed and on October 3, 2011 Caltrans signed off on the project's environmental report.

Background

The Sixth Street Viaduct, a reinforced concrete structure with steel arches over the Los Angeles River, is a historical landmark built in 1932 (City No. 1275, State No. 53C1880). The bridge is one of California's longest bridges in a high population zone, spanning more than 3,600 feet. It also serves as an important transportation east-west corridor, linking Boyle Heights and downtown Los Angeles by carrying two lanes of traffic in each direction over the Los Angeles River, Santa Ana Freeway, several railroad tracks and surface streets. The viaduct is composed of three independent structures: the reinforced concrete west portion, the central steel arch section over the Los Angeles River, and the reinforced concrete east portion. The portion of the bridge spanning over the I-5 Freeway is owned by Caltrans.

The Sixth Street Viaduct suffers from a condition known as Alkali Silica Reactivity (ASR) which weakens the concrete strength and limits the ability to retrofit the bridge to current standards. The bridge is listed on Caltrans' mandatory seismic retrofit list and analyses performed indicate that this bridge has a 70 percent probability of failure, as compared to a standard of 10 percent, during a 7.0 magnitude earthquake within the next 50 years. This probability of failure increases every year. There are no known methods to reverse or stop ASR and if nothing is done to mitigate the ASR impact, the concrete elements will crumble and fall apart. No other bridge in the City has this severe condition and it is imperative that the City replace the bridge structure.

Project Scope, Budget and Timeline

Since 2001, the BOE has undertaken various preliminary activities related to the SSVIP, including community outreach, environmental analysis, planning and geotechnical studies. In addition to these activities, the project site was visited by the California Transportation Commission on September 9, 2009 to understand the issues related to the bridge structure and review the ASR impact on the structure.

The scope of the project includes: design, demolition of the existing bridge, associated right- of-way acquisitions and construction of a replacement bridge. The City will refine the look of the bridge during the final design process to ensure that both an architecturally distinctive and cost-effective design expression is selected for construction. Design details of the preferred extradosed cable supported bridge type could evolve into different engineering and architectural expressions of this concept. Examples of these expressions include tower and cable connections, color, textures, lighting, railings and gateway elements. The footprint of the bridge will be realigned to smooth out a geometric deficiency or "roadway kink" in the original bridge design. The project is anticipated to take six years from certification of the environmental documents, through design, right-of-way acquisition, construction and beneficial occupancy. The total cost estimate for the SSVIP is $401 million. The source of funds for the project includes the following:

$365.6 million	Federal Highway Bridge Program (HBP)
$29.7 million	State Proposition 1B, Local Bridge Seismic Retrofit Program
$.2 million	Other State Funds
$5.5 million	City of Los Angeles (Proposition G & Proposition C)

The timeline for each phase of this project is as follows: Pre-design is currently on-going and expected to be completed by January 2012. Final design is expected to start in January 2012 and be completed by July 2014, right-of-way activities would also begin in January 2012 and be completed by September 2014, construction is anticipated to begin in January 2015 with completion by December 2017. Close-out activities would be completed by December 2019.

The federal and state monies are allocated on an annual reimbursement basis. The annual allocations contain specific dollar caps associated with distinct project phases, i.e., right-of-way, design, and construction. As a general rule, the federal government will reimburse right- of-way costs at $22.6 million per year. For construction costs, the federal reimbursement will increase to $50 million per year with a state match of $6.4

million. The project's annual costs, however, are expected to exceed these amounts in some years. This will require gap and front-funding. To address this issue, it is recommended that the Council approve the use of the Advanced Construction Authority (AC) process, as described below, for the construction of the SSVIP and authorize the project to utilize MICLA financing for the necessary gap financing needs.

Advance Construction Authority (AC)

The process known as Advance Construction Authority (AC) allows local jurisdictions to commit funds in advance of federal and state budget authority. In order to take advantage of this process, the City must apply to Caltrans and demonstrate sufficient funds to cover project costs until federal reimbursements are available. Conversely, without AC, financing for the project would be limited to the annual reimbursements. Since project expenditures will exceed the reimbursements, especially during the construction phase, proceeding without AC is infeasible. In order for the City to complete the project in a timely and cost-effective manner, as well as take advantage of the low local match requirement, it will be necessary for the City to use the AC process.

The City's expenses related to the MICLA expenses (principal, cost of issuance and debt service) are allowable federal and state grant expenditures. This means that the City will eventually be fully reimbursed for these costs. The risk to the City of undertaking AC is that if federal funds are not provided, it would be necessary for the City to identify up to $401 million to complete the project or cancel the project. It is unlikely that the federal government would not provide the funding they have committed to this project. However, until a new federal surface transportation bill is adopted, receipt of the funds is uncertain. Financial risk to the City can be mitigated if the award of the bridge construction contract occurs after Congress approves a new reauthorization of federal surface transportation funding. Therefore, we recommend that the City Engineer be required to obtain Council authority before executing the construction contract for this project.

The City's financial exposure and need for MICLA financing may be reduced if the City is awarded federal monies that are unspent by other jurisdictions and become available each year. These federal monies are known as Additional Obligation Authority. They are not an additional source of funds to the project, but rather, an advancement of future year reimbursements as mentioned above. The amount available annually ranges from $20 million to $200 million statewide. The City may be able to take advantage of this funding next federal fiscal year since all our environmental documents should be completed by December 2011.

High Cost Commitment Letter

To memorialize the City's commitment of local resources (AC) for cash flow purposes in anticipation of grant reimbursements, the State has required that the City submit a High Cost Commitment Letter which outlines the terms and conditions of the AC and the HBP reimbursement schedule. This letter is required for all State projects with budgets between $100 million and $500 million. The City Engineer submitted this letter to the State contingent on City Council approval of the Financial Plan by December 1, 2011. Under the AC process, the City assumes responsibility for the project costs until all yearly state and federal allocations have been disbursed. As the project progresses,

project budget authority responsibility shifts from the City to the federal funding until the federal and state monies fully fund the project. Other jurisdictions such as San Francisco, San Diego and Long Beach also have large-scale bridge replacement projects that are being constructed through the AC process.

MICLA Authority

As stated above, by approving the financial plan, the City is committing to cash flow project expenditures until annual federal and state reimbursements are available. The cash flow mechanism proposed is the issuance of up to $98.5 million in MICLA financing (Commercial Paper Program) over the life of the project. The financing falls into the City's 7.5 percent ceiling debt category because the project has dedicated funding repayment sources. The City has sufficient capacity within this debt ceiling category to proceed with the $98.5 million financing. Additionally, the MICLA financing will not affect the City's self-imposed six percent ceiling on non-voter approved debt because, as noted above, the project costs are reimbursable from federal and state grants. It is estimated that, over the life of the project, interest costs of up to $8.2 million will be financed by the General Fund and will later be reimbursed by the federal and state funding sources.

The MICLA Commercial Paper (CP) Program has the capacity to issue up to $300 million of short-term notes to finance capital equipment items and capital projects. As of October 14, 2011, the amount of outstanding CP is $204 million. The City anticipates refinancing approximately $125 million of CP into long-term lease revenue bonds in January 2012 allowing the CP to be used for other short-term financing needs. The refinancing will be completed prior to SSVIP drawing down $67.4 million in MICLA financing as shown below. Based on the SSVIP MICLA repayment schedule, the request for $98.5 million in MICLA financing for cash flow purposes will not impact the funding for the active MICLA capital projects. Unlike most MICLA capital projects, SSVIP does not create an additional General Fund long-term obligation for the City because the MICLA CP Program will be reimbursed in full.

As stated in the CAO's report dated October 17, 2011, the City's relationship with current Letter of Credit providers is under review as part of the larger dialogue on responsible banking in the City. The outcome of these discussions may negatively affect the City's ability to use CP to cash flow this project. Our offices will monitor the impact of this banking issue on the project.

BOE and their financial consultant prepared the following chart that shows annual anticipated project expenses, planned federal and state reimbursements, MICLA cash flow required and projected MICLA repayments:

Fiscal Year	Anticipated Expenses	Available Reimbursements	MICLA Cash Flow Required	MICLA Payback
Prior yrs	$ 17.10	$ 17.10	$ 0.00	$ 0.0
2012	$ 100.00	$ 32.60	$ 67.40	$ 0.0
2013	$ 15.61	$ 32.60	$ 0.00	$ 16.99
2014	$ 3.00	$ 22.60	$ 0.00	$ 19.60

2015	$ 66.80	$ 79.10	$ 4.33	$ 16.63
2016	$ 63.64	$ 70.67	$ 7.14	$ 14.18
2017	$ 74.24	$ 56.50	$ 17.74	$ 0.0
2018	$ 58.39	$ 56.50	$ 1.89	$ 0.0
2019	$ 2.19	$ 33.30	$ 0.00	$ 31.10
Total	$ 400.97	$ 400.97	$ 98.50	$ 98.50

The tentative MICLA drawdown schedule assumes MICLA is used to fund project invoices and that federal and state reimbursements are processed and received within four months. The reimbursements would then be used to cash flow subsequent project invoices on a revolving basis until the annual federal and state reimbursement limits are reached. Once the annual reimbursements are exhausted, the City would use MICLA financing to cover additional invoices until the beginning of the next federal and state fiscal year when new annual allocations would be available.

Project Delivery

For the purposes of the Financial Plan, the project budget is based on a traditional Design/Bid/Build approach to project delivery. However, in an effort to control the project implementation time, project costs and to assure receipt of a quality product, the City is also exploring an alternative project delivery method known as Construction Manager at Risk or CMAR.

This alternative project delivery method uses an integrated team approach in which the City hires the construction contractor early in the design process to perform constructability reviews as plans are developed, manage risk and facilitate concurrent design and construction. Both the project design firm and the contractor work collaboratively together and with the City to implement the project. Advantages to this method include a better final product and a reduction in implementation time without the owner relinquishing control over the project details. This method does not reduce the project costs, but it does reduce the unknowns encountered during the construction phase.

The design firm is expected to be selected using the standard City process. However, in CMAR, the contractor is selected using a qualification-based process. At the end of the design phase, the contractor will provide the City with a guaranteed maximum price. If the City does not accept the guaranteed maximum price, the City could proceed to bid and award. It should be noted that under CMAR project delivery, change orders are expected to be reduced but not eliminated.

There is a trend in the construction industry to explore this alternative project delivery method. The Los Angeles World Airports is currently using CMAR for the Tom Bradley International Terminal Reconfiguration Project and the Department of Water and Power is using this method to implement the Silver Lake Reservoir Complex Storage Replacement Project.

Currently, a report and ordinance on alternative project delivery are being developed by the CAO, CLA, BOE, BCA and the City Attorney. If the proposed ordinance is adopted, it is expected that project construction timelines will be accelerated. It is anticipated

that the Mayor and Council will make a policy decision on the citywide application of CMAR before BOE makes a final decision on whether to use CMAR specifically on SSVIP.

Staffing

This complex project will require up to ten positions to satisfactorily meet project needs. Staffing will be required from 2011-12 through 2019 when close-out activities are completed. The project will require seven positions this fiscal year to complete the environmental process and begin the final bridge design. Three of these are existing resolution authorities in the bridge program which can be reassigned to the SSVIP and four positions will require resolution authority for the balance of the fiscal year. As the project progresses, an additional three positions will be required in 2012-13 to coordinate right-of-way activities for up to 32 parcels and to interface with multiple federal, county, and state agencies, the railways, the entities that have oversight of the river, several utilities that intersect the project site, and the historical community. The staffing plan will be reviewed and adjusted accordingly each year to determine appropriate staffing levels.

BOE is requesting that the SSVIP be managed by a position at the level of Principal Civil Engineer Project Manager III. Given the scope and budget of the project, we concur that this position is warranted.

The cost of these positions is estimated to be $9.6 million, including related costs. There is sufficient funding in the project budget to cover the proposed staffing.

RECOMMENDATIONS:

That the Council, subject to the approval of the Mayor:

1. Note and file the joint City Administrative Officer/Chief Legislative Analyst report to Council dated August 4, 2010 titled "Sixth Street Viaduct Improvement Project – Financial Plan" (C.F. 10-1409);

2. Authorize a total project budget of $400,996,227 for the Sixth Street Viaduct Improvement Project as the current budget consistent with the project's Environmental Impact Report;

3. Authorize the City Engineer to execute and submit an Advanced Construction Process Financial Plan for the Sixth Street Viaduct Improvement Project to the appropriate federal and state authorities for approval (Attachment 1, Exhibit 4);

4. Authorize the issuance of up to $98.5 million in MICLA financing to cash flow the Sixth Street Viaduct Improvement Project with the understanding that all of the City's costs related to this financing will be fully reimbursable from federal and state grants;

5. Concur with the City Engineer's execution of the Highway Bridge Program High Cost Commitment Letter required by the State;

6. Authorize, by resolution, the employment of the four positions listed below, subject to allocation by the Personnel Department and pay grade determination by the City Administrative Officer;

No.	Code	Class Title
1	9489-D	Principal Civil Engineering PM III
1	7965-B	Structural Engineer PM 1
1	9184-2	Management Analyst II
1	1368	Senior Clerk Typist

7. Instruct the City Engineer to report back to the City Council prior to the award of the construction contract for this project; and

8. Authorize the City Administrative Office to make any technical corrections necessary to implement the intent of the Mayor and the Council.

FISCAL IMPACT

Adoption of this report commits the City to assume financial responsibility for this $401 million project in advance of annual state and federal reimbursements. The City's financial responsibility decreases each year as reimbursements are made. In the unlikely event that a new federal transportation bill is not approved, the City would be responsible for either completing or canceling the project. To mitigate this financial risk, the City Engineer must report back prior to executing a construction contract for this project.

Debt Impact Statement
Use of $98.5 million in MICLA financing will require that the General Fund initially cash flow the interest costs associated with this transaction. The anticipated interest cost of $8.2 million is included in the total estimated cost of the project of $401 million. The project's federal and state grant funding sources will fully reimburse the City for these MICLA costs.

Attachment: Bureau of Engineering Report - Sixth Street Viaduct Improvement Project - dated September 15, 2011.

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CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: September 15, 2011

To: Seismic Governance Committee
Miguel A. Santana, City Administrative Officer, Chair
Gerry F. Miller, Chief Legislative Analyst
Gary Lee Moore, City Engineer

From: James Treadaway, S.E., Program Manager
Bridge Improvement Program
Bureau of Engineering

Subject: Sixth Street Viaduct Improvement Project W.O. E700224A

RECOMMENDATIONS

That the Seismic Governance Committee approve and recommend that the City Council:

1) Note and File the Bureau of Engineering SGC report dated May 27, 2010, and the corresponding joint CAO/CLA report to Council (Attachment 1) dated August 4, 2010 titled "SIXTH STREET VIADUCT IMPROVEMENT PROJECT – FINANCIAL PLAN" (CF 10-1409);

2) Authorize a total project budget of $400,996,227 for the Sixth Street Viaduct Improvement Project as the current budget consistent with the project's Environmental Impact Report;

3) Authorize the City Engineer to execute and submit an Advanced Construction Process Financial Plan for the Sixth Street Viaduct Improvement Project to the appropriate federal and state authorities for approval;

4) Authorize the issuance of up to $98.5 million in MICLA financing to cash flow the Sixth Street Bridge Project with the understanding that all of the City's costs related to this financing will be fully reimbursable from federal and state grants;

5) Concur with the City Engineer's execution of the Highway Bridge Program High Cost Commitment Letter required by the State;

6) Approve the proposed project staffing plan for Sixth Street Viaduct Improvement Project shown in Attachment Six for Fiscal Year 2011-12 including the following changes;

   - Addition of one Principal Civil Engineer PM III in the Bureau of Engineering
   - Addition of one Structural Engineer PM I in the Bureau of Engineering

- Addition of one Management Analyst II in the Bureau of Engineering
- Addition of one Senior Clerk Typist in the Bureau of Engineering

7) Request that the City Administrative Officer and the Chief Legislative Analyst transmit the recommendations to the City Council.

Background

In May 2010, the SGC approved a budget report of $359 million for this project. However, before Mayor and Council consideration of this budget amount could take place, Caltrans informed the City that further environmental review was necessary. The project has now completed all required environmental work. BOE is proposing that the SGC approve a new budget amount of $401 million for this project, consistent with the current Federal Transportation Improvement Plan (FTIP) adopted budget of $400,996,227. This amount represents a $42 million increase over the May 2010 budget. The increases for the various phases of work can be broken down as follows:

- $1.8M increase is due to additional costs to complete the environmental phase. Under the current Federal Transportation Bill SAFETEA-LU, FHWA responsibilities to review and approve Environmental Impact Statements were delegated to Caltrans. The Sixth Street Viaduct is one of the first projects to be reviewed for legal sufficiency by Caltrans under "NEPA delegation." As such, the Caltrans comments were mainly of a legal nature and not anticipated by the project team, including staff from Caltrans district environmental office. The comments prompted additional environmental review which, in turn, delayed the project by approximately one year. This increase will also fund other pre-Record of Decision work such as pre-appraisals, utility planning, and final design Task Order development.
- $10.0M increase is due to underestimating the necessary engineering work in the prior budget estimate, and consideration of a more complex cable type bridge rather than a concrete box girder bridge.
- $19.9M increase is due to higher right-of-way and utility relocation costs associated with Alignment 3B as opposed to the 3B-Modified version which involves fewer parcels and smaller square footage of partial parcel acquisitions on the east side. The decision to return to the original recommendation of Alignment 3B stems from Caltrans legal review comments and the potential need to recirculate the draft EIR which would result in significant schedule delays. The 3B-Modified alternative was introduced to the public during the latter stage of the review process by the project team in an effort to minimize overall right-of-way costs. However, from an engineering standpoint, the 3B alternative is superior in terms of driver comfort and safety and the ability to meet the desired design speed. Utility cost estimates have been increased to account for longer relocation routes that were not planned for in previous estimates. Of the $19.9M increase, $5.97M is associated with bond financing costs based on projected right-of-way expenditures.

- $10.0M increase is due to underestimating the necessary engineering support, inspection and contract administrative work in the prior budget estimate. The current level of effort for construction support within the budget has been reviewed and concurred with by Caltrans. In addition, this amount includes $2.19M of bond financing costs based on projected construction phase expenditures.

Table 1 below shows the increase in cost for each phase of the proposed $401M project budget:

Table 1 – Proposed Project Budget

PROJECT PHASES	Existing Amount	Proposed Increase	Proposed Amount
Project Approval/Env Doc – EIR/EIS	$15.3M	$1.8M	$17.1M
Final Design PS&E	$10.0M	$10.0M	$20.0 M
Right-of-Way (incl. $5.97M Financing cost)	$84.7M	$19.9M	$104.6M
Construction Cost (incl. $2.19M financing cost)	$249.3M	$10.0M	$259.3M
TOTAL	**$359.3M**	**$41.7M**	**$401.0M**

Funding Plan

The revised Financial Plan dated August 2011 is included in this report as Attachment 4.

The State has required that the City commit local resources to cash flow the project in anticipation of grant reimbursement spread over multiple year. This cash management is required of all State HBP high cost projects (between $100 million and $500 million) and is known as Advance Construction (AC). The AC commitment requires the execution of a High Cost Project Commitment Letter that is prepared by Caltrans and signed by the local authority. The terms and conditions of the AC and annual HBP reimbursement amounts are defined in the HBP High Cost Commitment Letter and its execution shall take place immediately after the approval of the Financial Plan and EIR. The City Engineer has signed this letter contingent on City Council approval of the Financial Plan no later than December 1, 2011.

A summary of the project costs is shown by phase in Table 2 and by project funding sources by phase in Table 3 below. Both include financing costs and reimbursements.

Table 2 – Project Costs by Phase

PROJECT PHASE	COST (escalated)
PA & ED (Project Approval and Environmental Doc)	$ 17,136,356
Final Design (Plans, Spec. & Estimates)	20,000,000
Subtotal, PA, ED, Final Design	**37,136,356**
ROW (Right of Way)	98,605,000
Financing Costs	5,968,871
Subtotal, ROW	**104,573,871**
Detour and Demo of Existing Viaduct	12,083,627
Reconstruction of Viaduct	220,008,033
CE (Construction Support)	25,000,000
Financing Costs	2,194,340
Subtotal, Construction	**259,286,000**
Total Project Cost	**$ 400,996,227**

Table 3 – Funding Sources by Phase

Funding Source	PA/ED/PS&E	ROW	CON & CE	Financing	Total
Highway Bridge Program (HBP)	31,415,085	98,605,001	227,633,005	7,910,862	365,563,952
Prop 1B Local Bridge Seismic Retrofit			29,458,655	252,349	29,711,004
Other State funds	200,000				200,000
City Matching	5,521,271				5,521,271
Total	$ 37,136,356	$ 98,605,001	$ 257,091,659	$ 8,163,211	$ 400,996,227

Note that for the ROW phase no local or state match is required, since Caltrans has approved the use of state toll credits for the ROW phase, which allows the City to use 100% federal funds for that phase only.

Local Funding

The Financial Plan calls for $5.5 million of local funding for the PA & ED and Final Design. That funding is composed of:

- CIEP $ 822,608
- Prop. C $1,744,146
- Measure R $2,000,000
- Prop. G $ 955,246

Total $5,522,000

MICLA Funding Needs

By approving the Financial Plan, the City is committing to cash flow project expenditures until annual federal and state reimbursements are available. The cash flow mechanism proposed is the issuance of up to $98.5 million in MICLA over the life of the project. The City's expenses related to the MICLA are fully reimbursable federal and state grant expenditures. It is estimated that, over the next eight years, interest costs of $8.2 million will be incurred and reimbursed by the federal and state funding sources.

BOE and their financial consultant prepared the following chart that shows annual anticipated project expenses, planned federal and state reimbursement, MICLA cash flow required and projected MICLA repayments. The City will work to minimize MICLA interest costs by efficiently managing the annual request for funding reimbursements and timing of MICLA financing. Regardless, those costs will be reimbursed, as described above.

Table 4 - Project Expenses and MICLA Cash Flow ($millions)

FY	Anticipated Expenses	Available Reimbursement	MICLA Cash Flow Required	MICLA Payback
2010-11 & Prior	$ 17.1	$ 17.1		
2011-12	100.0	32.6	67.4	
2012-13	15.6	32.6		17.0
2013-14	3.0	22.6		19.6
2014-15	66.8	79.1	4.3	16.6
2015-16	63.6	70.7	7.1	14.2
2016-17	74.2	56.5	17.7	
2017-18	58.4	56.5	1.9	
2018-19	2.2	33.3		31.1
Totals	$ 400.9	$ 401.0	$ 98.4	$ 98.5

Sixth Street Viaduct Project Delivery Options

The recommended EIR/EIS alternative calls for the removal of the existing viaduct with a new viaduct being constructed along a new alignment. As part of the preliminary engineering efforts, several different roadway alignments and structure types were investigated. For the purposes of this financial plan, the preferred alternative, alignment 3B and bridge concept 4 (a 4-span extradosed concrete bridge over the LA River, with concrete box girder approach spans) was selected to establish the project budget and schedule.

Design/Bid/Build (DBB) is proposed for this project as it will protect the currently planned funding. This method is described below.

Design/Bid/Build

For the establishment of project budget, the City is considering one bid package for demolition and construction. An early contract may be let for local roadway improvements, necessary for the detour to take place prior to the demolition and for relocating utilities. The phases are listed below.

- Final Design Activities
  - Utilizing Final PS&E, the construction bid package would be advertised in July 2014, with construction award in January 2015.
- ROW Activities
  - ROW acquisition work commences after ROD. RR agreements and utility coordination to be completed by September 2014.
- Construction Activities
  - Construction is anticipated to begin in January 2015 with completion by December 2017.
  - Contractor mobilization and construct detour
  - Construction of viaduct to be phased with demolition operations (existing building and existing viaduct).

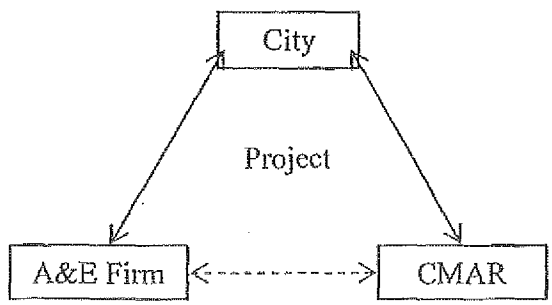
In an effort to control the project implementation time, costs and City risks and to assure delivery of a quality product, the City is exploring other innovative delivery options, including Construction Manager at Risk (CMAR), which is described below.

Construction Manager at Risk (CMAR)

Construction Manager at Risk (CMAR) is a specific contracting method utilizing an integrated "Team" approach applying modern management techniques to the planning, design, and construction of a project. The "Team" consists of the City, an A&E firm (retained by the City), and the CMAR (retained by the City). The CMAR method includes both pre-construction and construction phase services.

Figure 1 shows the contractual relationships that would occur between the City, the A&E Firm and the CMAR if the City chose to select this delivery method.

Figure 1 – CMAR Project Delivery Method – Contractual Relationships



The aim of this project delivery method would be to engage at-risk construction expertise early in the design process to enhance constructability, manage risk, and facilitate concurrent execution of design and construction without the owner relinquishing control over the details of design as it might occur in a design-build project.

The procurement process would be managed as follows:

- The A&E firm is selected using the standard consultant qualification-based selection process.
- The CMAR is selected using a qualification-based, Request for Proposal (RFP) process. During the end of the design process, the contractor then provides the owner with a "guaranteed maximum price", which the owner can accept, negotiate or re-bid, if unacceptable.

The CMAR method, if selected, would complete design and construction under two separate contracts issued by the City, but creates intentional points of contact between the engineer and the contractor to encourage collaboration and gain insight during design, and provide constructability reviews early enough in design development to add value to the project. This model offers the owner management latitude to gain the benefits offered by design-build delivery while maintaining nearly the same level of control over design and construction offered by traditional delivery methods.

In the April 2008 Performance Audit of the construction of the Police Administration Building project, one of the City Controller's key findings was that the City was not taking advantage of the Construction Manager at Risk delivery method.

BIP Federal Approved Consultant Status

Since the project is funded largely through federal grants, design and construction support consultants must comply with federal procurement requirements. This procurement process involves an extensive Caltrans review of a contractor's base and overhead rates, historical costs, estimation procedures and the existence of a financial management system to support cost proposals. Each firm must also comply with the requirements of the federal Disadvantaged Business Enterprises program so that the affected project can participate in the Department of Transportation Financial Assistance program.

The BIP currently has ten on-call consultants for design and construction support and two on-call consultants for program management support that were selected through a process that meets the federal procurement requirements. However, the term of these contracts expires in October 2014, after the final design work on the Sixth Street Viaduct Project will be completed but before construction will begin. While, BIP will be developing a new federal on-call consultant list for design and construction support and anticipates having a five-year contract executed before the end of 2013, the selection of the consultant for this project cannot wait for the new list.

The BIP has two options: BIP can solicit proposals from the established on-call list for the project's final design and amend the contract term upon award through the end of construction; or BIP can award a final design contract that expires in October 2014 and then award a design consultant contract for the construction phase once a new on-call list is established. This issue will be addressed as the project progresses.

City Staffing Plan

The magnitude of a $401 million project such as the Sixth Street Viaduct Improvement Project is similar to the recently completed Police Administration Building Program ($436 million). However the complexity of the bridge replacement itself is magnified many times by the heightened Environmental process, complex right-of-way issues and acquisitions, coordination with highway, river-way and railways, community sensitivities and the multiple utilities intersecting this project. The Sixth Street Viaduct Improvement Project is a de facto program much like the PAB was a program, and the staffing plan reflects its enormity.

The Police Administration Building was authorized seven resolution authorities to provide project management/construction management. These positions included a Principal Civil Engineer PM III, a Senior Civil Engineer PM II, a Senior Architect PM II, a Senior Management Analyst II, a Civil Engineer, and a Management Analyst II. In addition there was in-house staff augmentation from the PM/CM Consultant with eight positions to assist with the project delivery.

Upon adoption of the Sixth Street Viaduct Improvement Project EIR by City Council, a staffing plan (Attachment Six) for City Staff is proposed to provide the critical project management and construction management support to the project. It is currently projected that the City staffing need will be in the range of up to ten positions over the term of the project to manage the Preliminary Engineering Project Approval/Environmental Document and Final Design Phase, as well as the Construction and Project Close Out/Post Construction Phases. Of the ten positions, four will be derived through the existing BIP staffing resolution authorities. Three of those four will come from positions currently assigned to ARRA projects that will be coming to conclusion within the next year. The six additional new positions are recommended and will be staffed in 2011-12 and 2012-13. The consideration of project and construction management skills, technical skills and administrative skills play in the position selection for this staffing plan.

A further consideration is the potential of utilization of CMAR as a project management tool to manage the project scope. CMAR will require bringing City staff on board earlier than the traditional Design-Bid-Build method for design and construction management, development, coordination and review of developing project scope, schedules, plans, RFI, and submittals.

There are sufficient funds in the project budget to pay for City staff salaries and related costs. The budget for Final Design is $20,000,000. It is estimated that 20% or $4,000,000 will be allocated for City Staff. The budget for CE (Construction Support) is $25,000,000. It is estimated that $8,000,000 will be allocated for City Staff, for a total of $12,000,000 for City Staff costs. Our proposed staffing plan is approximately $9.6 million.

Table 5: Sixth Street Viaduct Improvement Program Staffing Allocation by Fiscal Year

Qty	FY 2011/12 (July 2011 - Dec 2011)		QTY	FY 2011/12 (Jan 2012 - June 2012)		FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
0			1	Prin Civil Engineer PM III (Program Manager)		Prin Civil Engineer PM III (Program Manager)	Prin Civil Engineer PM III (Program Manager)	Prin Civil Engineer PM III (Program Manager)	Prin Civil Engineer PM III (Program Manager)	Prin Civil Engineer PM III (Program Manager)	Prin Civil Engineer PM III (Program Manager)
1	Sr. Structural Engineer/PM II		1	Sr. Structural Engineer/PM II		Sr. Structural Engineer PM II	Sr. Structural Engineer PM II	Sr. Structural Engineer PM II	Sr. Structural Engineer PM II	Sr. Structural Engineer PM II	Sr. Structural Engineer PM II
1	Structural Engineer/ PM I		1	Structural Engineer/ PM I		Structural Engineer/ PM I	Structural Engineer/ PM I	Structural Engineer/ PM I	Structural Engineer/ PM I	Structural Engineer/ PM I	Structural Engineer/ PM I
1	Structural Engr Assoc III		0	Structural Engineer		Structural Engineer	Structural Engineer	Structural Engineer	Structural Engineer	Structural Engineer	Structural Engineer
			2	Structural Engr Assoc III		Structural Engr Assoc III	Structural Engr Assoc III	Structural Engr Assoc III	Structural Engr Assoc III	Structural Engr Assoc III	Structural Engr Assoc III
			0	Civil Engr Assoc III		Civil Engr Assoc III	Civil Engr Assoc III	Civil Engr Assoc III	Civil Engr Assoc III	Civil Engr Assoc III	Civil Engr Assoc III
			1	Mgmt Analyst II		Mgmt Analyst II	Mgmt Analyst II	Mgmt Analyst II	Mgmt Analyst II	Mgmt Analyst II	Mgmt Analyst II
			1	Sr. Clerk Typist		Sr. Clerk Typist	Sr. Clerk Typist	Sr. Clerk Typist	Sr. Clerk Typist	Sr. Clerk Typist	Sr. Clerk Typist
3		$227,539.61	7		$489,670.41	10	10	10	10	10	10
						$1,382,935.47	$1,421,607.45	$1,460,279.43	$ 1,501,272	$ 1,543,494	$ 1,586,983
										TOTAL STAFFING	$9,918,780.41

Environmental Document Status

The Administrative Draft of the Final Environmental Impact Report/Environmental Impact Statement and Section 4(f) Evaluation has been reviewed for a second time by Caltrans Headquarters Legal. The City is currently responding to 139 comments. The target date for receiving a signed Environmental Impact Statement from Caltrans is early October 2011.

Within the City, the approval process of the Final Environmental Impact Report (FEIR) includes:

- Board of Public Works Hearing;
- City Council Public Works and Transportation Committee Hearing; and
- Council approval of the FEIR and Seismic Governance Committee Report on the Financial Plan.

The target date for Council approval is before November 30, 2011. The ROD (Record of Decision) is anticipated before the year end.

Community Outreach

City of Los Angeles staff implemented extensive community outreach activities to present the project considerations to obtain feedback. The outreach activities began at the inception of the PA/ED phase with the formation of the Community Advisory Committee (CAC). The CAC members were a cross segment of community stakeholders and included business owners, residents, non-profits, law enforcement officers, preservation groups, representatives of City of Los Angeles and elected officials. The meetings with

community stakeholders began as early as March 2007 and have been on-going on regular basis. The list below highlights of the meetings held with stakeholders:

- Public Information Meetings
  - January 23, 2007: Art share Los Angeles
  - January 25, 2007: Saint Isabel Church
- Scoping Meetings
  - August 14 & 16, 2007
- Public Hearing-
  - July 14 and 21, 2009
- Stakeholder Group & Agency Meetings
  - February 13, 2007: Boyle Heights Neighborhood Council Land Use Committee
  - March 12, 2007: Boyle Heights Quadrant 4
  - March 13, 2007: Downtown LA Neighborhood Council
  - May 9, 2007: Boyle Heights Quadrant 3
  - May 19, 2007: Boyle Heights Resident Homeowners Assoc.
  - October 3, 2007: Arts District Business Improvement District
  - October 4, 2007: CRA/LA Eastside Region
  - October 29, 2007: LA Conservancy
  - February 4 & March 24, 2008: Caltrans Participating Agency Meetings
  - April 23, 2008: AIA Workshop
- Community Advisory Committee (CAC) Meetings
  - #1: March 29, 2007
  - #2: May 10, 2007
  - #3: June 28, 2007
  - #4: August 28, 2007
  - #5: November 8, 2007
  - #6: March 26, 2008
  - #7: October 28, 2008
  - #8: February 12, 2009
  - #9: April 8, 2009
  - # 10: July 29, 2010

In addition to the meetings listed above, Bridge program staff held several briefings with elected officials, Mayor's staff, Caltrans senior leadership, California Transportation Commission members, City Council staff and affected business and property owners.

JT/jk/dk

Attachment No. One – May 27, 2010 SGC and August 4, 2010 CAO Report on FP
Attachment No. Two - HBP High Cost Commitment Letter
Attachment No. Three – October 25, 2010 SGC Report
Attachment No. Four – Revised Financial Plan dated August, 2011
Attachment No. Five – EIR Executive Summary
Attachment No. Six – Proposed Staffing Plan for FY 2011-12

cc: Deborah Weintraub - BOE
M. Cardenas/ L. Hancock - CAO
J. Gibson/M. Rountree/P. Smith - CLA
J. Koo/ D. Kitagawa / J. Wu / M. Yang – BOE
File: PG-1
1880-A-1

REVISED 9/19/2011

ATTACHMENT SIX

SIXTH STREET VIADUCT IMPROVEMENT PROGRAM

Proposed Staffing Plan for Fiscal Year 2011 - 12

Bureau of Engineering

BOE will utilize two existing positions (Sr Structural Engineer PM II and Structural Engineer Associate III) for Project Approval and Environmental Doc Phase beginning FY 2011-12. For the Final Design Phase beginning after January 2012, one additional existing position (Structural Engineer Associate III) and the four new positions (Principal Civil Engineer PM III; Structural Engineer PM I; Management Analyst I and Sr Clerk Typist) will be assigned to the program pending approval and authorization of the four new positions.

1	9489-D	Principal Civil Engineer PM III	New
1	9425-C	Senior Structural Engineer PM II	Existing BIP
1	7956-B	Structural Engineer PM I	New
2	7957	Structural Engineer Associate III	Two Existing BIP - Currently ARRA positions
1	9184-2	Management Analyst II	New
1	1368	Senior Clerk Typist	New
7			**Three existing and four new resolution authorities Total for FY 2011 -12**

SEVEN TOTAL FOR FY 2011 - 12

Proposed Staffing Plan for Fiscal Year 2012-13 through 2017-18

1	9489-D	Principal Civil Engineer PM III	New FY 2011-12	
1	9425-C	Senior Structural Engineer PM II	Existing BIP	*begins in July 2011
1	7956-B	Structural Engineer PM I	New FY 2011-12	*begins in after Jan 2012
1	7956	Structural Engineer	New FY 2012-13	*begins in July 2012
2	7957	Structural Engineer Associate III	Existing BIP - ARRA positions	*One begins in July 2011, one in Jan 2012 : Both currently 2011/12 ARRA positions
1		Civil Engineer Associate III	Existing BIP - ARRA position	*Begins after July 2012: Currently 2011/12 ARRA position
1	7957	Structural Engineer Associate III	New FY 2011-12	*Begins after July 2012
1	9184-2	Management Analyst II	New FY 2011-12	*Begins after Jan 2012
1	1368	Senior Clerk Typist	New FY 2011-12	*Begins after Jan 2012
10			**Four existing and six new resolution authorities Total for FY 2012-12 thru 17-18**	

TEN TOTAL FOR FY 2011-12 THROUGH FY 2017-18

ATTACHMENT ONE

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: May 27, 2010

To: Seismic Governance Committee
Ray Ciranna, Interim City Administrative Officer, Chair
Gerry F. Miller, Chief Legislative Analyst
Gary Lee Moore, City Engineer

From: Julie Sauter, Program Manager
Bridge Improvement Program
Bureau of Engineering

Subject: 6th Street Viaduct Seismic Improvement Project – Financial Plan and Recommendations for Project Financing

AUTHORITY TO ISSUE FINANCING FOR THE REPLACEMENT OF THE 6TH STREET VIADUCT OVER THE LOS ANGELES RIVER (BRIDGE NO. 53C-1880) AND THE 6TH STREET OVERCROSSING, WHICH IS A PORTION OF THE US 101 HOLLYWOOD FREEWAY (BRIDGE NO. 53-0595).

RECOMMENDATIONS

That the Seismic Governance Committee approve and recommend that the City Council:

1. Authorize up to $72.4 million of MICLA short term bonds to cover the anticipated cumulative annual federal and state funding allocation shortfalls for the project. The principle of these bonds as well as the issuance and interest costs, estimated at $14.0 million will be reimbursed by federal Highway Bridge Program (HBP) funds, matched by state Proposition 1B Local Bridge Seismic Retrofit Account (LBSRA) funds;
2. Approve the Advanced Construction funding plan shown in Table 1, "Project Funding Plan with Advanced Construction Authority by Phase". This table shows how Caltrans will approve funding for each phase of the project (i.e. ROW or Construction) and then allocate future years' funding through an "Advanced Construction Authority" mechanism. This authority also allows the City to qualify for the reimbursement of bond costs.

DISCUSSION

Background

The Sixth Street Viaduct Seismic Improvement Project is funded with state and federal funds, with a local City of Los Angeles match. The total project cost is estimated at $359.3 million, which includes financing costs. The City is contributing $4 million of the total project cost as

local match. The funding plan has been incorporated into the project's required Financial Plan[1]. The Financial Plan needs to be submitted before the project secures its environmental Record of Decision, anticipated in October 2010. Caltrans has approved the total funding for the project with federal HBP funds matched by state Proposition 1B LBSRA funds. These funds are stretched out over a longer time period than the project's cash flow requires. Therefore, the City will need to finance a portion of the cash flow to keep the project on schedule.

Funding Plan

The following charts show the project costs and the funding plan. These assumptions, including the need to finance the cash flow, as described in the next section, are included in the Project's Financial Plan.

Chart 1: Project Costs

PROJECT PHASE	COST (escalated)
PA & ED (Project Approval and Environmental Doc)	$ 15,316,356
Final Design (Plans, Spec. & Estimates)	10,000,000
ROW (Right of Way)	81,833,000
Financing Costs	2,890,395
Detour and Demo of Existing Viaduct	12,548,466
Reconstruction of Viaduct	210,506,290
CE (Construction Support)	15,145,000
Financing Costs	11,086,247
Total Project Cost	$ 359,325,754

[1] The Draft Financial Plan for the Sixth Street Viaduct Seismic Improvement Project has been prepared in accordance with federal requirements and consistent with FHWA Financial Plan Guidance. Federal Highway Administration (FHWA) issued a Memorandum *"Project Financial Plan Requirements under SAFETEA-LU"* which directed every state Department of Transportation (DOT) and public agency receiving federal highway funds to prepare Project Financial Plans for projects between $100 and $500 million in accordance with the FHWA Financial Plan Guidance issued May 2000 and updated on January 2007. This plan must be accepted by Caltrans before the project's environmental plan can be certified.

Chart 2: Project Funding Plan

Fund No.	Fund Title	Dept. No.	Acc't. No.	Total
	Federal Highway Bridge Program (HBP) Funds			**$ 304.4 million**
	State Proposition 1B Bridge Seismic (LBSRA) Funds			**$ 36.7 million**
	City Matching Funds – Prop. C Line Item, CIEP and Prop. G Seismic Bond			**$ 4.0 million**
	Other State Funds			**$ 0.2 million**
	Reimbursement of Bond Financing Costs (Federal HBP with State Prop 1B LBSRA match)			**$ 14.0 million**
	Total, Funding			**$ 359.3 million**

Financing Needs

The following sections discuss:

- The federal and state funding allocation shortfalls and how they would be mitigated with MICLA bonds;
- A way to accelerate state and federal funding and thereby reduce MICLA bonds needs;
- The monthly invoice reimbursement assumptions; and
- Advanced Construction Authority (AC).

Federal and State Funding Allocation Shortfalls and Need for MICLA Bonds: Caltrans has agreed to program full funding for the 6th Street Viaduct Project, but stretched out over a longer time period. This allocation plan does not fit the Project's cash flow needs but fully funds the project over time. In order to keep the Project on schedule, the City would need to issue bonds (i.e. MICLA) in the early years of the project and be paid back by the federal and state funds in the later years of the project.

The federal guidelines allow the federal HBP grant, matched by Proposition 1B funds, to pay back the bonds proceeds as well as the issuance and interest costs.[2]

[2] States and public agencies can now receive Federal-aid reimbursements for a wide array of debt-related costs incurred in connection with an eligible debt financing instrument, such as a bond, note, certificate, mortgage, or lease, the proceeds of which are used to fund a project eligible for assistance under Title 23. The issuer may be a state, political subdivision, or a public authority.

The $72.4 million the City will need in MICLA bonds is the gap between the required funding and the yearly reimbursement as follows and shown in Chart 4:

- The annual gaps in funding are projected to be $13.4 million in 2011, $1.4 million in 2012, $30.6 million in 2014, $18.5 in 2015 and $8.5 million in 2016, for a total of $72.4 million.
- The projected payback would be $0.7 million in 2013, $14 million in 2014, $45.4 million in 2017 and $12.2 million in 2018, for a total of $72.4 million.

Chart 5 shows when the MICLA bonds would be used and the assumed interest costs that would be reimbursed. For this analysis, 5% interest costs, or a total of $14 million, were conservatively assumed for MICLA bonds. The actual interest and issuance costs would be reimbursed by state (Prop. 1B) and federal (HBP) funds.

Ability to Accelerate Funds from Caltrans: Caltrans has restricted the funding each year to the amounts listed in Table 2. But, each year, the City has potential to request additional funds that other jurisdictions are unable to use. The overall state and federal funding for the 6th Street Viaduct project would not increase, but the amounts per year could be accelerated. If the City successfully petitioned and received these funds, then the City could potentially reduce the amount of MICLA funding it would need to borrow. The City will still need the authority for the $72 million of MICLA bonds and will monitor the actual cash needs on a quarterly basis.

Monthly Invoice Reimbursement Delays: For the funds that will be available each year according to Caltrans, staff has conservatively assumed that the reimbursement of monthly invoices will be delayed by four months each during the Right-of-Way (ROW) phase and three months each during the Construction phase. The Public Works Trust Fund will be used, up to a maximum balance at any time of $10 million, to cover any potential delays in invoice reimbursements.

Advanced Construction Authority (AC): Table 1 shows how all of the funding is authorized by Caltrans on a phase by phase (ROW, construction, etc.) basis. It also reflects how the 6th Street Viaduct project is listed in the Federal Transportation Improvement Program (FTIP).

At the time of the authorization for each phase, Caltrans will allocate the first year's funding and then show the subsequent years' funding as "Advanced Construction Authority" or "AC". Caltrans then allocates funds on a year by year basis until all funds are allocated.

Advanced Construction Authority (AC) is a way for Caltrans to program the full, multiyear funding commitments for the project while allocating funds on a year to year basis. It does not

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This change to the Federal-aid program was codified into permanent highway law as an amendment to Section 122 of Title 23 U.S.C. Bond-related costs now eligible for Federal-aid reimbursement include interest payments, retirement of principal, and any other cost incidental to the sale of an eligible bond issue.

The FHWA guidance states that the project must be approved as a Federal-aid debt-financed (bond, certificate, note, or other debt instrument) project in order to receive payments for eligible debt-related costs under section 122. With the approval of the 6th St. Financial Plan, Caltrans will approve the project as a Federal-aid debt-financed project.

require more City MICLA funds nor does it change the funding plan in Table 2. This authority does allow the City to qualify for the reimbursement of any MICLA bond issuance and interest costs.

In the unlikely event that the state or federal government would no longer have a transportation funding program, then Caltrans could not allocate the future years' funding for the project. In that case, the City would have the option to defer or cancel the project.

Timeline

The Finance Plan, which includes the assumptions for financing, must be submitted to and accepted by Caltrans prior to the certification of the 6th Street Viaduct Project environmental document, anticipated in October 2010. The Draft Financial Plan has been submitted to Caltrans for their review and Caltrans has prepared a draft approval letter. The Caltrans approval letter will be finalized once the City approves the recommendations in this report for financing and Advanced Construction Authority.

Attachments:

Attachment A:

- Table 1, Project Funding Plan with Advanced Construction Authority by Phase
- Table 2, Summary of cash flow and financing needs – costs and funding by fiscal year.
- Table 3, Right-of-Way financing needs
- Table 4, Construction financing needs

Attachment B:

- 6th Street Viaduct Seismic Improvement Project Fact Sheet

c: Councilmember Jose Huizar
A. Cubas / P. Habib – CD14
J. Koo / D. Weintraub – BOE
J. Gibson / P. Smith – CLA
M. Cardenas / L. Hancock – CAO

Chart 4: Annual Funding Shortfalls and Reimbursement Schedule

Annual Funding Shortfalls and Reimbursements ($ in 000's)									
Fiscal Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
Shortfalls	$ (13,401)	$ (1,401)		$ (30,551)	$ (18,503)	$ (8,503)			$ (72,359)
Reimbursements			$ 766	$ 14,036			$ 45,346	$ 12,211	$ 72,359

Chart 5: Recommended City of LA Financing to Keep 6th Street Viaduct Project on Schedule

Recommended City of LA Financing by Project Phase ($ in 000's)									
Project Phase	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
ROW									
MICLA Bond Issue (July)	$ 13,401								$ 13,401
Interest Costs	670	670	670	670	-	-	-	-	2,680
MICLA Bond Issue (July)		1,401							1,401
Interest Costs		70	70	70	-	-	-	-	210
Total Bond Proceeds-ROW	13,401	1,401	-	-	-	-	-	-	14,802
Total Interest Costs-ROW	670	740	740	740	-	-	-	-	2,890
Construction									
MICLA Bond Issue (July)				30,551					30,551
Interest Costs				1,528	1,528	1,528	1,528	-	6,110
MICLA Bond Issue (July)					18,503				18,503
Interest Costs					925	925	925	925	3,701
MICLA Bond Issue (July)						8,503			8,503
Interest Costs						425	425	425	1,275
Total Bond Proceeds-CON	-	-	-	30,551	18,503	8,503	-	-	57,557
Total Interest Costs-CON	-	-	-	1,528	2,453	2,878	2,878	1,350	11,086
ROW and Construction									
Total Bond Proceeds	$ 13,401	$ 1,401	$ -	$ 30,551	$ 18,503	$ 8,503	$ -	$ -	$ 72,359
Total Interest Costs	$ 670	$ 740	$ 740	$ 2,268	$ 2,453	$ 2,878	$ 2,878	$ 1,350	$ 13,977

ATTACHMENT ONE

Table 1: Programmed Costs and Funding Sources

Phase Summary	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond	Total
PE	$ 16,000,000	$ 9,316,356	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,316,356
ROW	-	-	-	84,723,395	-	-	-	-	84,723,395
Construction and CE	-	-	-	-	-	-	249,286,003	-	249,286,003
Total --->	$ 16,000,000	$ 9,316,356	$ -	$ 84,723,395	$ -	$ -	$ 249,286,003	$ -	$ 359,325,754

Fund Source Summary	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond	Total
Fed $	$ 12,800,000	$ 7,453,085	$ (8,000,000)	$ 28,853,000	$ 20,000,000	$ 20,000,000	$ 65,005,622	$ 170,692,898	$ 316,804,605
Local Match	3,200,000	1,863,271	(853,000)	7,126,561	(2,591,212)	(2,591,212)	20,170,938	(22,115,075)	4,210,271
LSSRP Bond	-	-	-	2,591,212	2,591,212	2,591,212	8,422,167	22,115,075	38,310,878
Local AC	-	-	8,853,000	46,152,622	(20,000,000)	(20,000,000)	155,687,276	(170,692,898)	-
Total --->	$ 16,000,000	$ 9,316,356	$ -	$ 84,723,395	$ -	$ -	$ 249,286,003	$ -	$ 359,325,754

PE Summary	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond	Total
Fed $	$ 12,800,000	$ 7,453,085	$ (8,000,000)	$ 8,853,000					$ 21,106,085
Local Match	3,200,000	1,863,271	(853,000)						4,210,271
LSSRP Bond									-
Local AC			8,853,000	(8,853,000)					-
Total --->	$ 16,000,000	$ 9,316,356	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,316,356

ROW Summary	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond	Total
Fed $				$ 20,000,000	$ 20,000,000	$ 20,000,000	$ 15,005,622		$ 75,005,622
Local Match				7,126,561	(2,591,212)	(2,591,212)	(1,944,137)		-
LSSRP Bond				2,591,212	2,591,212	2,591,212	1,944,137		9,717,773
Local AC				55,005,622	(20,000,000)	(20,000,000)	(15,005,622)		-
Total --->	$ -	$ -	$ -	$ 84,723,395	$ -	$ -	$ -	$ -	$ 84,723,395

Construction Summary	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Beyond	Total
Fed $							$ 50,000,000	$ 170,692,898	$ 220,692,898
Local Match							22,115,075	(22,115,075)	-
LSSRP Bond							6,478,030	22,115,075	28,593,105
Local AC							170,692,898	(170,692,898)	-
Total --->	$ -	$ -	$ -	$ -	$ -	$ -	$ 249,286,003	$ -	$ 249,286,003

Local AC: Local Advanced Construction Authority

Data replicated from Caltrans summary of 2008/S-2013/14 Highway Bridge Program, dated 3/24/2010.

This chart is the Caltrans Federal Transportation Improvement Program (FTIP) listing for this project.

ATTACHMENT ONE

Attachment A

6th Street Viaduct Project Financial Charts

Table 2: 6th Street Viaduct Project Cash Flow and Financing Requirements

PHASE	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
PA/ED (Proj Approval and Envir Doc)	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,316,356
Final Design (PS&E)	-	-	-	5,000,000	5,000,000	-	-	-	-	-	-	10,000,000
Subtotal, PA/ED and PS&E ---->	8,438,785	2,763,245	4,114,326	5,000,000	5,000,000	-	-	-	-	-	-	25,316,356
ROW (Right of Way)	-	-	-	36,000,000	24,000,000	21,833,000	-	-	-	-	-	81,833,000
ROW Financing Costs	-	-	-	-	-	-	2,890,395	-	-	-	-	2,890,395
Subtotal, ROW ---->	-	-	-	36,000,000	24,000,000	21,833,000	2,890,395	-	-	-	-	84,723,395
CONSTRUCTION COST (CON)												
Detour and Demo of Existing Viaduct	-	-	-	-	-	-	12,548,466	-	-	-	-	12,548,466
Reconstruction of Viaduct	-	-	-	-	-	-	70,000,000	70,000,000	60,000,000	10,506,290	-	210,506,290
CE (Construction Support)	-	-	-	-	-	-	4,500,000	5,000,000	5,000,000	645,000	-	15,145,000
Construction Financing Costs	-	-	-	-	-	-	-	-	-	-	11,086,247	11,086,247
Subtotal, Construction and CE---->	-	-	-	-	-	-	87,048,466	75,000,000	65,000,000	11,151,290	11,086,247	249,286,003
Total Project & Financing Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 41,000,000	$ 29,000,000	$ 21,833,000	$ 89,938,861	$ 75,000,000	$ 65,000,000	$ 11,151,290	$ 11,086,247	$ 359,325,754

FUNDING	Fiscal Year 2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total
Highway Bridge Program (HBP) - PA/ED/PS&E	$ 6,751,028	$ 2,210,596	$ 3,291,461	$ 4,426,500	$ 4,426,500	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,106,085
Highway Bridge Program (HBP) - ROW	-	-	-	20,000,000	20,000,000	20,000,000	12,446,755	-	-	-	-	72,446,755
Highway Bridge Program (HBP) - Construction	-	-	-	-	-	-	50,000,000	50,000,000	50,000,000	50,000,000	16,878,244	216,878,244
Highway Bridge Program (HBP) - Financing Costs	-	-	-	-	-	-	2,558,867	-	-	-	9,814,654	12,373,521
Subtotal, HBP Funds ---->	6,751,028	2,210,596	3,291,461	24,426,500	24,426,500	20,000,000	65,005,622	50,000,000	50,000,000	50,000,000	26,692,898	316,804,605
Prop 1B Local Bridge Seismic Retrofit- ROW	-	-	-	2,598,870	2,598,870	2,598,870	1,845,504					9,642,115
Prop. 1B Local Bridge Seismic Retrofit- Const							6,241,306	6,497,175	6,497,175	6,497,175	1,332,811	27,065,643
Prop 1B Local Bridge Seismic Retrofit- Financing Costs	-	-	-	-	-	-	331,528	-	-	-	1,271,593	1,603,121
Subtotal, Prop 1B Funds ---->	-	-	-	2,598,870	2,598,870	2,598,870	8,418,339	6,497,175	6,497,175	6,497,175	2,604,404	38,310,878
Other State Funds	200,000	-	-	-	-	-	-	-	-	-	-	200,000
City Matching Funds	1,487,757	552,649	822,865	573,500	573,500	-	-	-	-	-	-	4,010,271
												-
Total Funding	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 27,598,870	$ 27,598,870	$ 22,598,870	$ 73,423,961	$ 56,497,175	$ 56,497,175	$ 56,497,175	$ 29,297,302	$ 359,325,754
Local Bonds	-	-	-	13,401,130	1,401,130	-	30,551,291	18,502,825	8,502,825	-	-	72,359,200
Payback of Local Bonds	-	-	-	-	-	765,870	14,036,390	-	-	45,345,835	12,211,055	72,359,200
Cumulative Balance	$ -	$ -	$ -	$ 13,401,130	$ 14,802,260	$ 14,036,390	$ 30,551,291	$ 49,054,116	$ 57,556,941	$ 12,211,056	$ 1	$ 1
Project Costs	8,438,785	2,763,245	4,114,326	41,000,000	29,000,000	21,833,000	87,048,466	75,000,000	65,000,000	11,151,290	-	345,349,112
Financing Costs-Interest Only*	-	-	-	-	-	-	2,890,395	-	-	-	11,086,247	13,976,642
Total Project & Financing Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 41,000,000	$ 29,000,000	$ 21,833,000	$ 89,938,861	$ 75,000,000	$ 65,000,000	$ 11,151,290	$ 11,086,247	$ 359,325,754

* Financing costs (interest and issuance costs) from local bonds/financing will be reimbursed by HBP funds, matched by Prop. 1B funds; assumes 5% APR (issuance costs not calculated but actual costs would be reimbursed).

ATTACHMENT ONE

Table 3: 8th Street Viaduct Project Cash Flow and Financing Requirements - ROW
Reimbursement Turnaround Scenario: 4-Months

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Invoice Period	Month	Project Cost Monthly	Project Cost Annual	MICLA Interest Cost Qtrly	MICLA Interest Cost Annual	Total Project & MICLA Interest Cost Monthly	Total Project & MICLA Interest Cost Annual	MICLA Proceeds	MICLA Payback	HSP/Prop 1B Reimbursement Monthly	Project Costs Balance	PWTF Loan Balance
1	Oct-2010	$ 3,000,000				$ 3,000,000		$ 13,401,130	$ -		10,401,130	-
2	Nov-2010	3,000,000				3,000,000					7,401,130	-
3	Dec-2010	3,000,000		167,514		3,167,514					4,233,616	-
4	Jan-2011	3,000,000	start RW			3,000,000					1,233,616	-
5	Feb-2011	3,000,000				3,000,000				3,000,000	1,233,616	-
6	Mar-2011	3,000,000		167,514		3,167,514				3,000,000	1,066,102	-
7	Apr-2011	3,000,000				3,000,000				3,167,514	1,233,616	-
8	May-2011	3,000,000				3,000,000				3,000,000	1,233,616	-
9	Jun-2011	3,000,000		167,514		3,167,514				3,000,000	1,066,102	-
10	Jul-2011	3,000,000				3,000,000				3,167,514	1,233,616	-
11	Aug-2011	3,000,000				3,000,000				3,000,000	1,233,616	-
12	Sep-2011	3,000,000	36,000,000	167,514	670,056	3,167,514	35,670,056			1,283,842	(670,056)	670,056
13	Oct-2011	2,000,000				2,000,000		1,401,130		4,803,572	3,834,746	-
14	Nov-2011	2,000,000				2,000,000				3,000,000	4,834,746	-
15	Dec-2011	2,000,000		185,028		2,185,028				3,000,000	5,449,718	-
16	Jan-2012	2,000,000				2,000,000				3,167,514	6,617,232	-
17	Feb-2012	2,000,000				2,000,000				2,000,000	6,617,232	-
18	Mar-2012	2,000,000		185,028		2,185,028				2,000,000	6,402,203	-
19	Apr-2012	2,000,000				2,000,000				2,185,028	6,617,232	-
20	May-2012	2,000,000				2,000,000				2,000,000	6,617,232	-
21	Jun-2012	2,000,000		185,028		2,185,028				342,655	4,774,859	-
22	Jul-2012	2,000,000				2,000,000					2,774,859	-
23	Aug-2012	2,000,000				2,000,000					774,859	-
24	Sep-2012	2,000,000	24,000,000	185,028	740,113	2,185,028	24,740,113				(1,410,169)	1,410,169
25	Oct-2012	1,819,417				1,819,417				10,027,401	6,797,815	-
26	Nov-2012	1,819,417				1,819,417				2,000,000	8,978,398	-
27	Dec-2012	1,819,417		185,028		2,004,445				2,000,000	8,973,954	-
28	Jan-2013	1,819,417				1,819,417				2,185,028	7,339,555	-
29	Feb-2013	1,819,417				1,819,417				1,819,417	7,339,555	-
30	Mar-2013	1,819,417		185,028		2,004,445				1,819,417	7,154,537	-
31	Apr-2013	1,819,417				1,819,417				2,004,445	7,339,585	-
32	May-2013	1,819,417				1,819,417				743,162	6,263,311	-
33	Jun-2013	1,819,417		185,028		2,004,445					4,256,866	-
34	Jul-2013	1,819,417				1,819,417					2,439,448	-
35	Aug-2013	1,819,417				1,819,417					620,032	-
36	Sep-2013	1,819,417	21,833,000	185,028	740,113	2,004,445	23,573,113		5765,570		(2,150,282)	2,150,282
37	Oct-2013					-				10,543,394	8,393,111	-
38	Nov-2013					-				1,819,417	10,212,528	-
39	Dec-2013			185,028		185,028				1,819,417	11,846,916	-
40	Jan-2014					-				2,004,445	13,851,361	-
41	Feb-2014					-				-	13,851,361	-
42	Mar-2014			185,028		185,028				-	13,666,333	-
43	Apr-2014					-				185,028	13,851,361	-
44	May-2014					-				-	13,851,361	-
45	Jun-2014			185,028		185,028				-	13,666,333	-
46	Jul-2014					-				185,028	13,851,361	-
47	Aug-2014					-				-	13,851,361	-
48	Sep-2014		-	185,028	740,113	185,028	740,113		$14,036,390	-	(370,057)	370,057
49	Oct-2014									185,028	(185,029)	185,029
50	Nov-2014									-	(185,029)	185,029
51	Dec-2014									-	(185,029)	185,029
52	Jan-2015									185,028	(0)	0
53	Feb-2015									-	(0)	0
54	Mar-2015									-	(0)	0
	TOTAL	$ 81,833,000	$ 81,833,000	$ 2,890,395	$ 2,890,395	$ 84,723,395	$ 84,723,395	$ 14,802,260	$ 14,802,260	$ 84,723,395	n/a	n/a

ATTACHMENT ONE

Table 4: 6th Street Viaduct Project Cash Flow and Financing Requirements – CONSTRUCTION & CE SUPPORT
Reimbursement Turnaround Scenario: 3-Months

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Invoice Period	Month	Project Cost Monthly	Project Cost Annual	MICLA Interest Cost Qtrly	MICLA Interest Cost Annual	Total Project & MICLA Interest Cost Monthly	Total Project & MICLA Interest Cost Annual	MICLA Proceeds	MICLA Payback	HBP/Prop 1B Reimbursement Monthly	Project Costs Balance	PWTF Loan Balance
1	Dec-2013	$ 8,704,847		381,891		$ 9,086,738		$ 30,551,291	$ -		21,464,553	-
2	Jan-2014	8,704,847				8,704,847					12,759,707	-
3	Feb-2014	8,704,847				8,704,847					4,054,860	-
4	Mar-2014	8,704,847		381,891		9,086,738				9,086,738	4,054,860	-
5	Apr-2014	8,704,847				8,704,847				8,704,847	4,054,860	-
6	May-2014	8,704,847				8,704,847				8,704,847	4,054,860	-
7	Jun-2014	8,704,847		381,891		9,086,738				9,086,738	4,054,860	-
8	Jul-2014	8,704,847				8,704,847				8,704,847	4,054,860	-
9	Aug-2014	8,704,847				8,704,847				8,704,847	4,054,860	-
10	Sep-2014	8,704,847	87,048,466	381,891	1,527,565	9,086,738				9,086,738	4,054,860	-
11	Oct-2014	8,250,000				8,250,000		16,302,825		8,704,847	25,912,531	-
12	Nov-2014	8,250,000				8,250,000				8,704,847	27,457,376	-
13	Dec-2014	8,250,000		813,176		9,063,176				9,086,738	29,680,839	-
14	Jan-2015	8,250,000				8,250,000				8,250,000	29,680,839	-
15	Feb-2015	8,250,000				8,250,000				8,250,000	29,680,839	-
16	Mar-2015	8,250,000		813,176		9,063,176				9,063,176	29,680,839	-
17	Apr-2015	8,250,000				8,250,000				5,955,140	28,486,083	-
18	May-2015	8,250,000				8,250,000					22,249,083	-
19	Jun-2015	8,250,000		813,176		9,063,176					15,362,905	-
20	Jul-2015	8,250,000				8,250,000					9,102,903	-
21	Aug-2015	8,250,000				8,250,000					2,687,903	-
22	Sep-2015	8,250,000	75,000,000	813,176	2,452,706	9,063,176					(2,960,270)	5,960,270
23	Oct-2015	5,416,667				5,416,667		8,302,825		38,921,210	36,027,097	-
24	Nov-2015	5,416,667				5,416,667				8,250,000	38,860,431	-
25	Dec-2015	5,416,667		719,462		6,136,128				9,063,176	40,587,479	-
26	Jan-2016	5,416,667				5,416,667				3,462,780	35,633,601	-
27	Feb-2016	5,416,667				5,416,667					33,216,935	-
28	Mar-2016	5,416,667		719,462		6,136,128					27,080,806	-
29	Apr-2016	5,416,667				5,416,667					21,664,139	-
30	May-2016	5,416,667				5,416,667					16,247,473	-
31	Jun-2016	5,416,667		719,462		6,136,128					10,111,344	-
32	Jul-2016	5,416,667				5,416,667					4,694,676	-
33	Aug-2016	5,416,667				5,416,667					(721,989)	721,989
34	Sep-2016	5,416,667	65,000,000	719,462	2,877,847	6,136,126					(6,858,117)	6,858,117
35	Oct-2016	928,274				928,274				38,497,175	48,709,784	-
36	Nov-2016	928,274				928,274					47,780,509	-
37	Dec-2016	928,274		719,462		1,648,736					46,131,774	-
38	Jan-2017	928,274				928,274					45,202,499	-
39	Feb-2017	928,274				928,274					44,273,225	-
40	Mar-2017	928,274		719,462		1,648,736					42,624,489	-
41	Apr-2017	928,274				928,274					41,696,215	-
42	May-2017	928,274				928,274					40,765,941	-
43	Jun-2017	928,274		719,462		1,648,736					39,117,205	-
44	Jul-2017	928,274				928,274					38,187,931	-
45	Aug-2017	928,274				928,274					37,258,657	-
46	Sep-2017	928,274	11,151,290	719,462	2,877,847	1,648,736			30,551,291		5,058,830	-
47	Oct-2017					-				18,366,000	24,427,830	-
48	Nov-2017					-				928,274	25,356,913	-
49	Dec-2017			675,141		675,141				1,648,736	26,330,508	-
50	Jan-2018					-				-	26,330,508	-
51	Feb-2018					-				-	26,330,508	-
52	Mar-2018			675,141		675,141			27,005,650	675,141	(675,142)	675,142
53	Apr-2018					-				-	(675,142)	675,142
54	May-2018					-				-	(675,142)	675,142
55	Jun-2018					-				675,141	(0)	0
56	Jul-2018					-				-	(0)	0
57	Aug-2018					-				-	(0)	0
58	Sep-2018				1,350,282	-				-	(0)	0
59	Oct-2018					-				-	(0)	0
60	Nov-2018					-				-	(0)	0
61	Dec-2018					-				-	(0)	0
62	Jan-2019					-				-	(0)	0
63	Feb-2019					-				-	(0)	0
64	Mar-2019					-					(0)	0
65	Apr-2019					-					(0)	0
											(0)	0
	TOTAL	$ 238,199,766	$ 238,199,756	$ 11,055,247	$ 11,055,247	$ 249,255,003	$ -	$ 57,556,941	$ 57,556,941	$ 249,255,003	n/a	n/a

ATTACHMENT ONE

Attachment B

6th Street Viaduct Project Fact Sheet

ATTACHMENT ONE

City of Los Angeles
6th Street Viaduct Seismic Improvement Project

PROJECT LOCATION/DESCRIPTION

- Located in a highly urbanized area just east of Downtown Los Angeles.
- Spans (Project length approximately 1 mile)
  - *Hollywood Freeway (US 101)*
  - *Los Angeles River*
  - *Union Pacific, Metrolink and future California High Speed Rail*
  - *Local streets*

ASR deterioration makes 6th Street Viaduct a top priority

FUNDING IS CRITICAL FOR SEISMIC SAFETY

- Viaduct was built in 1932, one of the oldest on system.
- Prop 1B project located in the highest population zone.
- Longest most complex right-of-way Prop 1B project.
- One of the most seismic vulnerable not retrofitted or replaced.
  - *70% probability of failure for a design level earth quake within 50 years and the probability increases every year!*
  - *Severe concrete deterioration from Alkali Silica Reactivity (ASR) continues to weaken the structure!*
  - *Collapse due to seismic vulnerabilities or ASR deterioration will have a major impact on transportation corridors!*
- Roadway geometric deficiencies contribute to on-going traffic accidents.

FUNDING SOURCE	TOTAL (million)
Federal Highway Bridge Program (HBP) Funds*	$316.7
Prop. 1B Local Bridge Seismic (LBSRA) Funds*	38.4
Other State Funds	0.2
City Matching Funds	4.0
PROJECT FUNDING TOTAL	$359.3

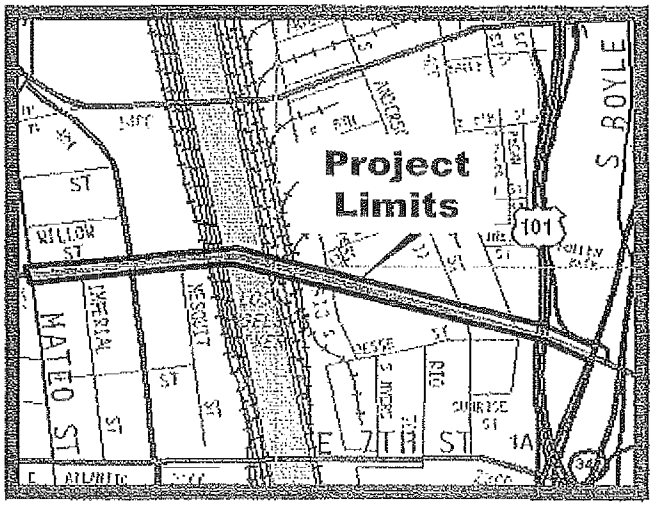
* includes reimbursement of City financing costs

COMMITMENT OF FUNDING ENSURES SEISMIC SAFETY

- The project costs have increased by $104.6 million
- Factors for cost increase:
  - *Public input on maintaining the signature nature of the existing bridge*
  - *Increased right-of-way needs*

PROJECT SCHEDULE IS "COMPETING AGAINST TIME"

Construction Start	December 2013
Construction Completion	December 2016



FORM GEN. 160

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

0160-01545-0000

Date: August 4, 2010

To: City Council

From: Miguel A. Santana, City Administrative Officer

Gerry F. Miller, Chief Legislative Analyst

Subject: SIXTH STREET VIADUCT IMPROVEMENT PROJECT – FINANCIAL PLAN

Summary
At it July 29, 2010 meeting, the Seismic Governance Committee considered a report from the Bureau of Engineering relative to the Financial Plan for the Sixth Street Viaduct Improvement Project (SSVIP). Based on that report, the City Administrative Office and Chief Legislative Analyst are transmitting joint recommendations to enable the City to complete the demolition and replacement of the Sixth Street Viaduct over the Los Angeles River.

The Sixth Street Viaduct (City No. 1275, State No. 53C1880), a reinforced concrete structure with steel arches over the Los Angeles River, is a historical landmark built in 1932. The bridge is one of California's longest bridges in a high population zone, spanning more than 3,600 feet. It also serves as an important transportation east-west corridor, linking Boyle Heights and downtown Los Angeles by carrying two lanes of traffic in each direction over the Los Angeles River, Santa Ana Freeway, several railroad tracks and surface streets. The viaduct is composed of three independent structures: the reinforced concrete west portion, the central steel arch section over the Los Angeles River, and the reinforced concrete east portion. The portion of the bridge spanning over the I-5 Freeway is owned by Caltrans.

The Sixth Street Viaduct suffers from a condition known as Alkali Silica Reactivity (ASR) which weakens the concrete strength and limits the ability to retrofit the bridge to current standards. The bridge is listed on Caltrans' mandatory seismic retrofit list and analyses performed indicate that this bridge has a 70 percent probability of failure, as compared to a standard of 10 percent, during a 7.0 magnitude earthquake within the next 50 years. This probability of failure increases every year. There are no known methods to reverse or stop ASR and if nothing is done to mitigate the ASR impact, the concrete elements will crumble and fall apart. No other bridge in the City has this severe condition and it is imperative that the City replace the bridge structure.

Project Scope and Budget
Since 2001, the Bureau of Engineering (BOE) has undertaken various preliminary activities related to the SSVIP, including community outreach, environmental analysis, planning and geotechnical studies. In addition to these activities, the project site was visited by the California Transportation Commission on September 9, 2009 to understand the issues related to the bridge structure and review the ASR impact on the structure.

The scope of the project includes: design, demolition of the existing bridge, associated right of way acquisitions and construction of a replacement bridge. The project is anticipated to take six years from certification of the environmental documents, through design, right of way acquisition, construction and beneficial occupancy. The total cost estimate for the SSVIP is $359.3 million. The source of funds for the project includes the following:

- $316.8 million (88%) – Federal Highway Bridge Program
- $38.3 million (11%) – State Proposition 1B, Local Bridge Seismic Retrofit Program
- $4.2 million (1%) - City of Los Angeles (Proposition G & Proposition C)

The federal and state monies are allocated on an annual, reimbursement basis. The annual allocations contain specific dollar caps associated with distinct project phases, i.e., right of way, design, and construction. As a general rule, the federal government will reimburse right of way costs at $20 million per year and the State will match this with $2.5 million per year. For construction costs, the federal reimbursement will increase to $50 million per year with a state match of $6.4 million. The City's annual costs for the project, however, are expected to exceed these amounts, which will require gap and front-funding. Therefore, it is recommended that the Council approve the use of Advanced Construction Authority (AC) process, as described below, for the construction of the SSVIP and utilize MICLA for the necessary gap financing needs.

Advance Construction Authority (AC)

The process known as Advance Construction Authority (AC) allows local jurisdictions to commit funds in advance of federal and state budget authority. In order to take advantage of this process, the City must apply to Caltrans and demonstrate sufficient funds to cover project costs until federal reimbursements are available. Not only will limiting the City's work to match the federal and state funding amounts increase the total project cost, it is infeasible during the construction phase. In order for the City to complete the project in a timely and cost-effective manner, as well as take advantage of the low local match requirement, it will be necessary for the City to use the AC process.

The City's expenses related to the MICLA expenses (principal, cost of issuance and debt service) are allowable federal and state grant expenditures. This means that the City will eventually be fully reimbursed for these costs. The risk to the City of undertaking AC is that if federal funds are not provided, it would be necessary for the City to identify up to $359 million to complete the project or cancel the project. It is unlikely that the federal government would not provide the funding they have committed to this project, however, the timing and nature of a new federal surface transportation bill makes the receipt of the City's funds uncertain. A new federal transportation bill should be in place before the award of the construction contract for the bridge, however, it is possible that reauthorization will not take place until after the 2012 elections. Financial risk to the City could be mitigated if the award of the bridge construction contract occurs after Congress approves a new reauthorization of Federal surface transportation funding, although reimbursements would still lag behind expected expenditures. Staff recommends that the City Engineer be required to obtain Council authority before executing the construction contract for this project.

It is possible that additional federal dollars would be available annually and, if awarded to the City, could reduce the amount of the MICLA budget for this project. The City's financial exposure and need for MICLA funding may also be reduced if the City is awarded federal monies that are unspent by other jurisdictions. These additional federal monies are known as Additional Obligation Authority (OA) and the amount available annually ranges from $20 million

to $200 million statewide. This year, the amount of OA available for the SSBRP may be as high as $95 million and may be granted to the City if all our environmental documents are completed by August 2010.

In order for the SSVIP to move forward, Caltrans has requested that the City's governing body approve the use of local AC and the funding source, such as MICLA, as a cash flow source for the yearly project expenses that exceed the federal and state annual reimbursements. The City would assume responsibility for the project costs until all yearly state and federal allocations have been disbursed. As the project progresses, project budget authority responsibility shifts from the City to the federal funding until the federal and state monies fully fund the project. Other jurisdictions such as San Francisco, San Diego and Long Beach also have large-scale bridge replacement projects that are being constructed through the AC process.

MICLA Authority

As stated above, by approving the financial plan, the City is committing to cash flow project expenditures until annual federal and state reimbursements are available. The cash flow mechanism proposed is the issuance of up to $72.4 million in MICLA over the life of the project. This MICLA issuance falls into the City's 7.5 percent ceiling debt category because the issuance has dedicated funding repayment sources. The City has sufficient capacity within this category to proceed with the issuance. This MICLA issuance will not affect the City's self-imposed five percent ceiling on non-voter approved debt because, as noted above, the City's expenses related to the MICLA are allowable federal and state grant expenditures. It is estimated that, over the next six years, interest costs of $14 million will be financed by the General Fund and later reimbursed by the federal and state funding sources.

It is recognized that the MICLA requirement for this project is a significant commitment from the City. While there are a number of other capital projects that have been deferred because MICLA funding for these projects was suspended, the SSVIP is a high priority project with only a small portion of local funding required. It is important to note that the deferred capital projects were subject to the City's six percent ceiling on non-voter approved debt, which created additional General Fund debt. The MICLA authority recommended for this project will not be a long-term General Fund obligation.

BOE and their financial consultant prepared the following chart that shows annual anticipated project expenses, planned federal and state reimbursements, MICLA cash flow required and projected MICLA repayments:

Fiscal Year	Anticipated Expenses	Available Reimbursements	MICLA Cashflow Required	MICLA Payback
Prior yrs	$ 15.3	$ 15.3	$ 0.0	$ 0.0
2011	$ 41.0	$ 27.6	$ 13.4	$ 0.0
2012	$ 29.0	$ 27.6	$ 1.4	$ 0.0
2013	$ 21.8	$ 22.6	$ 0.0	$ 0.8
2014	$ 89.9	$ 73.4	$ 30.6	$ 14.1
2015	$ 75.0	$ 56.5	$ 18.5	$ 0.0
2016	$ 65.0	$ 56.5	$ 8.5	$ 0.0
2017	$ 11.2	$ 56.5	$ 0.0	$ 45.3
2018	$ 11.1	$ 23.3	$ 0.0	$ 12.2
Total	$ 359.3	$ 359.3	$ 72.4	$ 72.4

The tentative MICLA drawdown schedule assumes MICLA is used to fund project invoices and that federal and state reimbursements are processed and received within four months. The reimbursements would then be used to cash flow subsequent project invoices on a revolving basis until the annual federal and state reimbursement limits are reached. Once the annual reimbursements are exhausted, the City would use MICLA to cover additional invoices until the beginning of the next federal and state fiscal year when new annual allocations would be available.

RECOMMENDATIONS:

That the Council, subject to the approval of the Mayor:

1. AUTHORIZE the City Engineer to execute and submit an Advanced Construction Process financial plan for the Sixth Street Viaduct Improvement Project to the appropriate federal and state authorities for approval;

2. AUTHORIZE the issuance of up to $72.4 million in MICLA financing to cash flow the Sixth Street Bridge Project with the understanding that all of the City's costs related to this financing will be fully reimbursable from federal and state grants;

3. INSTRUCT the City Engineer to provide monthly updates on the status of this project to the Seismic Governance Committee and require a specific authorizing action by the City Council before each phase of the project is undertaken and prior to the award of the construction contract for this project.

FISCAL IMPACT

Use of $72.4 million in MICLA funding will require that the General Fund initially cash flow the interest costs associated with this transaction. The anticipated interest cost of $14 million is included in the total estimated cost of the project of $359.3 million. The project's federal and state grant funding sources will fully reimburse the City for these MICLA costs. In the unlikely event that a new federal transportation bill is not approved, the City would be responsible for either completing or cancelling the project. We recommend that the City Engineer obtain City Council authority to award the construction contract for this project so that we can be assured that a new Federal surface transportation bill has been authorized by Congress by the construction award date.

Attachments:
6th Street Viaduct Seismic Improvement Project Initial Financial Plan
Bureau of Engineering Report-Authority to Issue Financing for the Replacement of the 6th Street Viaduct over the Los Angeles River-dated May 27, 2010.

MAS:GPM:LEH:MSR:05110002

ATTACHMENT TWO

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DIVISION OF LOCAL ASSISTANCE, MS 1
1120 N STREET
P. O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 653-1776
FAX (916) 654-2409

Flex your power!
Be energy efficient!

June 27, 2011
FTIP/FSTIP ID: LA0G104
BRLSZD-5006(342)/(664)
Sixth Street Bridge Replacement Project

Mr. Garry Moore
City Engineer
City of Los Angeles
1149 S. Broadway
Los Angeles, CA 90015

ATTN: Jim Treadaway
Seismic Bond Group

Dear Mr. Treadaway:

The purpose of this letter is to commit the California Department of Transportation (Department) to fund the Sixth Street Bridge Replacement Project (Project) consistent with the attached draft project funding sheets. The Department requests the City of Los Angeles (Agency) to concur with this letter and attached funding sheets and commit local resources consistent with the most recent financially constrained Program list for the Los Angeles County region, dated 3/28/2011, previously transmitted to the Southern California Association of Governments (SCAG). The Agency should follow up with the SCAG to ensure timely incorporation of the Program list into the Federal Transportation Improvement Program (FTIP).

The Department, in cooperation with the Local Assistance Highway Bridge Program (HBP) Advisory Committee (California Streets & Highway Code Section 2413), has implemented a policy (Office Bulletin 11-02) to fund high cost projects. Members of Local Assistance HBP Advisory Committee include the Department (Chair), representatives from the League of California Cities, the California State Association of Counties, the California Association of Councils of Governments, California Transportation Commission staff, and the Federal Highway Administration.

It has been demonstrated that high cost projects commit large sums of federal funds but cannot spend the funds in one year due to local agency contract processes, time to mobilize the contractors and the time it takes to actually construct large projects. These idled federal funds could be used to advance other projects. Cash management is critical to effective stewardship of the local assistance HBP.

This letter implements the cash management policy for the Project. The Project is subject to the high cost policy because the Right of Way (R/W) and Construction phase each exceeds $20 million.

The Department's funding commitments, as shown in the attached draft project funding sheet, are conditional. The conditions are as follows:

1. Agency is responsible for committing (budgetary) non-federal fund sources to fund the Advance Construction (AC) to cash flow the high cost phase of the Project.

2. AC conversion may not be automatic if there are delays in constructing the Project. At least 50% of the federal funds obligated on the Project must be spent to justify future programmed AC conversion.

3. Office Bulletin 10-01 authorizes the Department to reserve current year HBP funds for projects programmed in that current year through March 30th. After March 30th, Department redirects the HBP funds to other projects that may be advanced from future years of the FTIP. Current year programmed AC conversion must be obligated prior to March 30th.

4. Additional AC conversion may be obligated in Federal Fiscal Years (FFY) 11/12, 12/13, and 13/14 using Expedited Project Selection Procedures (EPSP), if HBP funds are available after April 15th of each year.

5. Proposition 1B bond funds, Local Bridge Seismic Retrofit Account, matching funds may only be encumbered on the project when matching federal funds are obligated on the Project as shown in the attached draft project funding sheets.

6. Congress has not yet authorized a new transportation act. It is unknown what the State's authority to commit and/or obligate future HBP funds will be until there is a new act. As noted in the attached funding sheets the Department has committed $50 million per year for construction phase in AC conversion. This is $30 million beyond what is allowed under Office Bulletin 11-02, *"Local Assistance Highway Bridge Program, High Cost Projects Programming Policy and Procedures."*

   The Department has also committed $22,591,212 per year for the Right of Way phase in AC Conversion. This is $591,212 beyond what is allowed under Office Bulletin 11-02, *"Local Assistance Highway Bridge Program, High Cost Projects Programming Policy and Procedures."*

   Under the recommendation of the HBP Advisory Committee, with agreement from the Department, this funding commitment is subject to retraction if Congress reduces future HBP revenue in the next or future act or if there is heavy demand for HBP funds in FFYs 13/14, 14/15, 15/16, 16/17, and 17/18.

7. If the federal funds for the initial authorization of R/W or construction phase shown in the attached draft project funding sheets is not obligated in the year programmed, the Agency must commit additional local AC resources on the project in the following year

to ensure the Project is fully funded or the project must be removed from the 4 year element of the FTIP until the next FTIP cycle. In either case, the funding commitment in this letter will be vacated and a new letter must be developed.

8. In the event the Project becomes inactive, the funding commitment in this letter may be vacated and a new a new letter must be developed. An "inactive project" is a project for which no expenditures have been charged against federal funds for the past 12 months. (23CFR630.106(a)(5))

9. Nothing in this letter can be considered a payable contractual commitment by the Department. Contractual commitments to the Agency are made through the procedures/processes defined in the Local Assistance Procedures Manual.

Other Recommendations:

10. The Agency is advised to ensure HBP funds are obligated prior to March 30th of any given year or risk losing programmed funds. It is recommended the Agency schedule project authorizations and AC conversions in the late fall of any given year to ensure federal funds are available.

11. This letter, returned to the District Local Assistance Engineer (DLAE), with Agency approval signature (below) may be used in lieu of the submittal of Exhibit 3-I, Request for Local Advance Construction Authorization, from the Local Assistance Procedures Manual.

12. The local agency is further reminded that this project is subject to mandatory value analysis since the total project cost is in excess of $20 million. If the total project cost is greater than $100 million, additional federal oversight will be required such as a multi-year financial plan and other project specific federally mandated oversight.

The Department requests the Agency to commit their local resources consistent with this letter and attached funding sheets. In the event the Agency cannot commit local funds to cash manage the Project, the Agency may request a meeting with the Department to appeal this policy.

If you have questions, please contact David Wang of my staff at (213) 897-2967.

Sincerely,

ERIK CESSNA, Chief
Office of Local Assistance and
Alameda Corridors

ATTACHMENT TWO

Local Agency AC Commitment Block

The Agency agrees to use local funds in lieu of federal funds to finance the cost of work as shown in the attached draft project funding sheets shown as LOCAL FUNDED AC until such time that federal funds become available for obligation and subsequent reimbursement of eligible work. It also is understood that federal reimbursement is not guaranteed for funds identified as LOCAL FUNDED AC.

The Agency understands that work performed prior to federal authorization is ineligible for federal reimbursement and that advertising the construction contract prior to federal authorization will deem the construction and construction phases of work ineligible for federal funds.

The execution of this commitment letter is contingent on City Council approval of the Financial Plan no later than December 1, 2011.

Amy Lee Moore — 7-7-11

Local Agency Representative Authorized to Commit Local Funds — Date

Title

Attachment

ATTACHMENT TWO

FOR DRAFT REVIEW ONLY — 2008/9-2013/14 Highway Bridge Program

5/2/2011, 5:16 PM

Notes: 1) MPOs/RTPA's must not use this listing for programming the RTIP.

2) This is NOT an approved listing for use in developing the FTIP/FSTIP. See the HBP web site for the official proposed FTIP/FSTIP program listings: http://www.dot.ca.gov/hq/LocalPrograms/

Note id: 18

ATTACHMENT TWO

FOR DRAFT REVIEW ONLY — 2008/9-2013/14 Highway Bridge Program

District: 07 County: Los Angeles

Responsible Agency	HBP-ID	Project Description
Los Angeles	3516	BRIDGE NO. 53C1880, 53-0595, SIXTH ST. OVER LOS ANGELES RIVER, E SANTA ANA FRWY. Replace seismically/structurally deficient Sixth Street Viaduct with new viaduct. No lanes being added. Toll credits used for R/W in lieu of Prop 1B seismic bond funds.

*For R/W, $22.6 M will be allocated in FFY 14/15, and $8.4 M in FFY 15/16.

**For Construction, $50 M will be allocated in FFY 14/15 thru FFY15/16 and $29.5 M in FFY 17/18.

Project #:
5006(342)
5006(664)

Phase Summary:	Prior	8/9	9/10	10/11	11/12	12/13	13/14	Beyond	Total
PE	16,000,000	9,316,356	-10,000,000	20,000,000					35,316,356
R/W*				104,573,871					104,573,871
CON**							259,286,003		259,286,003
Total	16,000,000	9,316,356	-10,000,000	124,573,871			259,286,003		399,176,230

Fund Source Summary:	Prior	8/9	9/10	10/11	11/12	12/13	13/14	Beyond	Total
Fed $	12,800,000	7,453,085	-8,000,000		40,297,212	22,591,212	72,591,212	216,346,133	364,078,854
Local Match	3,200,000	1,863,271	-2,000,000	2,294,000			23,262,075	-23,262,075	5,357,271
LSSRP Bond							6,478,030	23,262,075	29,740,105
Local AC				122,279,871	-40,297,212	-22,591,212	156,954,686	-216,346,133	0
Total	16,000,000	9,316,356	-10,000,000	124,573,871			259,286,003		399,176,230

PE Summary:	Prior	8/9	9/10	10/11	11/12	12/13	13/14	Beyond	Total
Fed $	12,800,000	7,453,085	-8,000,000		17,706,000				29,959,085
Local Match	3,200,000	1,863,271	-2,000,000	2,294,000					5,357,271
LSSRP Bond									
Local AC				17,706,000	-17,706,000				
Total	16,000,000	9,316,356	-10,000,000	20,000,000					35,316,356

R/W Summary:	Prior	8/9	9/10	10/11	11/12	12/13	13/14	Beyond	Total
Fed $*					22,591,212	22,591,212	22,591,212	36,800,235	104,573,871
Local Match									
LSSRP Bond									
Local AC				104,573,871	-22,591,212	-22,591,212	-22,591,212	-36,800,235	0
Total				104,573,871					104,573,871

CON Summary:	Prior	8/9	9/10	10/11	11/12	12/13	13/14	Beyond	Total
Fed $**							50,000,000	179,545,898	229,545,898
Local Match							23,262,075	-23,262,075	
LSSRP Bond							6,478,030	23,262,075	29,740,105
Local AC							179,545,898	-179,545,898	
Total							259,286,003		259,286,003

ATTACHMENT THREE

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: October 25, 2010

To: Seismic Governance Committee
Miguel A. Santana, City Administrative Officer, Chair
Gerry F. Miller, Chief Legislative Analyst
Gary Lee Moore, City Engineer

From: James Treadaway, S.E., Program Manager
Bridge Improvement Program
Bureau of Engineering

Subject: 6th Street Viaduct Seismic Improvement Project W.O. E700224A
Project Status, Environmental Delay Extra Work and Budget Adjustments

RECOMMENDATIONS

For information only. Receive and file.

Final Environmental Documentation Delay

The environmental clearance has been delayed 9 months, from October, 2010 to July, 2011.

The Final Environmental Document (FED) for the 6th Street Viaduct Seismic Improvement project was submitted to Caltrans in May 2010 for legal sufficiency review. Prior to submittal to Caltrans, the FED was reviewed by both City staff and Caltrans District staff for completeness. After the review was completed by both the city and Caltr5ans District staff, the document was submitted to Caltrans Headquarters and Legal for review and approval. During Caltrans Legal Sufficiency review, Caltrans noted inconsistencies between the technical studies and the FED. Caltrans has requested to revise the documents. Revisions to the FED are expected to delay the Record of Decisions (ROD) for the 6th Street Viaduct project by 9 months.

During the legal sufficiency review, Caltrans indicated that inconsistencies exist between the Technical Studies prepared for this project and the FED. Furthermore, Caltrans indicated that the District Functional Units only reviewed the document pertaining to the portion of the bridge over the state right of way and not the entire document. Caltrans stated that because, they are responsible for the NEPA document and their staff did not review the technical studies in its entirety, additional review cycles are required prior to obtaining the approval from Caltrans Legal and Headquarters.

The City staff held series of meetings with Caltrans environmental staff and their functional units to understand the extent of the comments and issues and determine a path forward. City held a re-chartering meeting to educate the functional units on the current status of the project and the expectations of the Caltrans staff in the review process. Based on these meetings, the following

steps were identified to obtain Caltrans approval:

1. Review each Technical Study and determine the revisions needed for consistency. Revise the document and submit the document to Caltrans environmental staff for review. Based on feedback from Caltrans environmental staff, revise technical studies.
2. Submit the May 2010 FED along with the revised technical studies to Caltrans for review for consistency between these documents. Caltrans Functional Units to review each document to ensure consistency.
3. Revise the Technical Studies and the May 2010 FED to incorporate comments received from Caltrans and submit back to Caltrans for final review and verification by the functional units.
4. Caltrans environmental staff and their functional units to review the revised document and provide approval that the documents have been changed to incorporate their comments/concerns.
5. Submit the revised technical studies and revised FED to Caltrans Legal and Headquarters for legal sufficiency review.
6. Caltrans Legal and Headquarters to review the revised final documents and provide comments to City.
7. City will revise the document to incorporate comments received from Caltrans Legal and Headquarters and submit the final report for verification.
8. Caltrans to provide final approval of the document

City has developed a draft schedule (Attachment No. 1) based on the above list of activities and estimate that the approval of the FED is delayed by approximately 9 months. City also has developed a level of effort to address the above activities. The City has requested the consultants to submit a fee proposal to complete the environmental document to obtain final approval. City will also be revising the cost estimate and the financial plan as part of the revised effort to complete the environmental document.

Fund Transfer For Extra Work

The City estimates that the additional effort to complete the extra work would be approximately $1.0 million with the Seismic Bond providing the required 20% local match during the design phase. The HBP will provide 80% or up to $800K for this extra effort. The total funds transferred to date, including this request, would still be within the previously authorized SGC project budget. The cash flow for the $800K is anticipated to be from the existing $10M Public Works Trust Fund loan for the Seismic Bond.

City had programmed $15.3M for the environmental document phase. Based on task orders issued and the city expenditures to-date, only about $14.1M has been utilized. Therefore, based on current funding, the city has the funds to complete the environmental phase. The remaining fund of approximately $1.2M is adequate to complete the additional work required to obtain the Record of Decision. City expects to issue the task order amendments to consultant by end of October to ensure continuity on this project.

Current Funding

This project is funded by multiple funding sources. The majority portion of the funding is provided by Caltrans using Federal Highway Bridge Program (HBP) funds. Local matching sources include

the State's Proposition 1B Bridge Seismic funds, City's Seismic Bond (Prop G) funds, City's Prop C and Measure R funds. The table below shows the current programmed funding amounts:

FUNDING SOURCES (by TYPE OF FUNDS)	AMOUNT
HBP (Highway Bridge Program) Federal Grant	$304.3 M
State Local Match - Proposition 1B Bridge Seismic Funds	$36.8 M
Other State Local Match Funds	$0.2M
City Proposition G (Seismic Bond), Prop C and Measure R Funds	$4.0 M
Bond Financing (HBP/1B) Funds	$14.0M
TOTAL	$359.3M

Proposed New Budget of $393 Million ($34 Million Increase)

One of the conclusions reached through meeting with Caltrans Environmental staff is to stay with the original Alignment 3B alternative, as opposed to a modified version to help reduce right-of-way cost. The modified version was introduced to the public late in the process which caused legal concerns and is less desirable geometrically. Adopting Alignment 3B as the preferred alternative will increase the right-of-way cost by roughly $14 million, from $84.7 million to $98.7 million. In addition, $6 million in right-of-way engineering support is needed as part of the Final Design phase cost. Other reevaluation of cost considered prudent at this time is the escalation factors used for the construction capital cost, and the budgets assigned for Final Design and Construction Engineering. The table below shows costs tentatively agreeable to Caltrans Local Assistance oversight staff:

FUNDING SOURCES (By Phase)	EXISTING AMOUNT	PROPOSED INCREASE	PROPOSED AMOUNT
Project Approval/Environmental Document	$15.3M	0	$15.3M
Final Design (incl. $6M increase for ROW Engr)	$10.0M	$10.0M	$20.0 M
Construction Engineering	$15.0M	$10.0M	$25.0M
Construction Cost *	$234.3M	0	$234.3M
Right-of-Way Cost	$84.7M	$14.0M	$98.7M
TOTAL	$359.3M	$34.0M	$393.3M

* The construction cost estimate was originally prepared in 2008 and appropriate escalation factors were applied based on the known construction climate at that time. Staff revisited the escalation factors based on directives received recently issued by the Bureau of Engineering.

Caltrans Local Assistance is in the process of submitting the revised cost figures to Metro. Metro in turn transmits the data to SCAG (Southern California Associated Governments) to perform an Air Quality Conformity Analsysis. It is then transmitted to FHWA for approval. Once the entire process is approved, the new project cost is entered into the Federal TIP (Transportation Improvement Plan).

The funding source and breakdown for the proposed new budget is as follows:

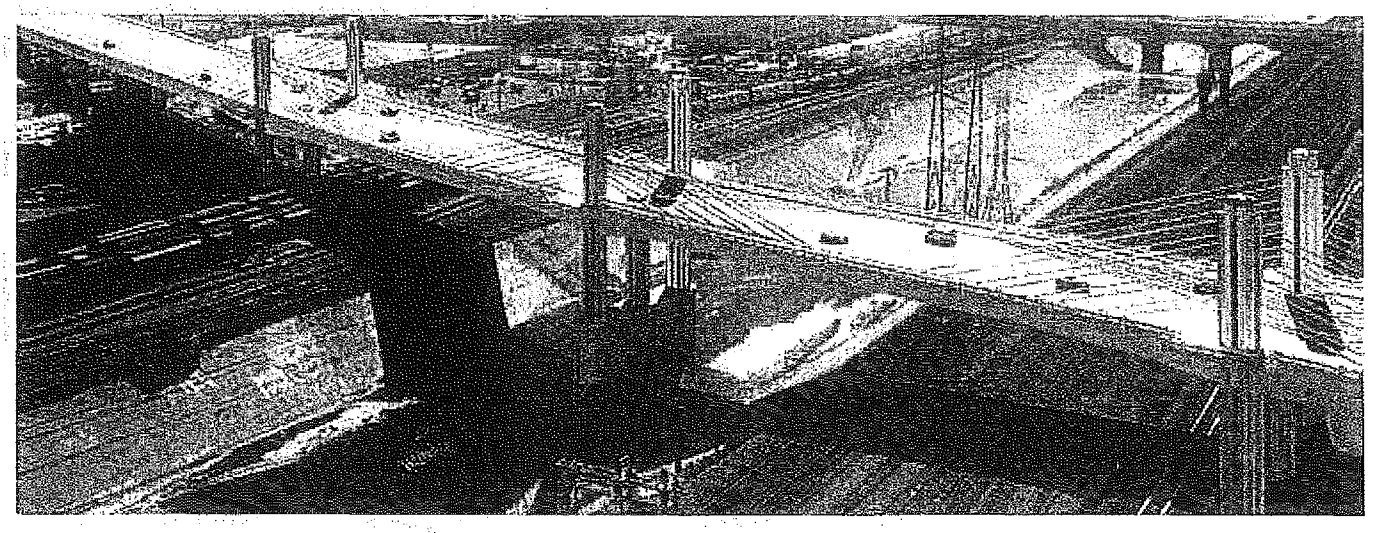
FUNDING SOURCES (by TYPE OF FUNDS)	AMOUNT
HBP (Highway Bridge Program), incl. Bond Financing Cost	$346.9 M
State Match - Prop 1B Bridge Seismic, incl. Bond Financing Cost	$40.86 M
Other State Local Match Funds	$0.20 M
City Local Match:	$5.36 M
TOTAL	$393.3M

The City staff also discussed the potential changes to the AC amount due to the delay and due to limited funds that can be allocated for this project by Caltrans. As required by Caltrans, City will be preparing a revised Financial Plan as part of the extra work effort that will incorporate changes to the cost as described above and will reevaluate the amount of AC funds required. The revised plan will be submitted to Caltrans for review and approval as a condition of FED approval.

JT/jk-jw

Attachment No. 1 – Schedule

cc: Deborah Weintraub - BOE
M. Cardenas/ L. Hancock - CAO
J. Gibson/M. Rountree/P. Smith - CLA
J. Koo/ D. Kitagawa / M. Yang – BOE
File: PG-1



6th Street Viaduct Seismic Improvement Project

City of Los Angeles, Los Angeles County, California

DISTRICT 7 - Bridge Nos. 53C-1880 and 53-0595

Federal Project No.: BRLSZD 5006 (342-664)

FINANCIAL PLAN

Prepared by the
City of Los Angeles
August 2011

ATTACHMENT NO. FOUR

TABLE OF CONTENTS

1. BACKGROUND

On December 8, 2005, FHWA issued a Memorandum *"Project Financial Plan Requirements under SAFETEA-LU,"* which directs every state Department of Transportation (DOT) to prepare Project Financial Plans for projects between $100 and $500 million in accordance with the FHWA Financial Plan Guidance issued May 2000 and updated December 2005.

The Project Financial Plan for the 6th Street Viaduct Seismic Improvement Project has been prepared in accordance with the FHWA guidance. . The capital cost estimates for various project alternatives, as outlined in Chapter 2 of the Project environmental document[1], range from $199 million for the Retrofit Alternative (30 year design life) to $409 million for the most costly bridge concept and alignment under the Replacement Alternative (75 year design life). The Project Financial Plan is developed using a Preferred Replacement Alternative budget amount of $401 million, which would include capital, soft and financial costs as detailed in Table 1.

1.1 Plan Update Schedule

The Financial Plan for the 6th Street Viaduct Seismic Improvement Project has been prepared in accordance to FHWA guidelines. The Plan will be updated annually effective October 1, 2012 and every year thereafter and whenever there is a significant change to the project scope and/or budget.

1.2 Adherence to Federal Financial Plan Guidance

This Plan has been prepared in accordance with the requirements of Section 106, Title 23, and the Financial Plan guidance issued by the Federal Highway Administration. The plan provides detailed cost estimates to complete the project and the estimates of financial resources to be utilized to fully finance the project. The federal guidance Attachment C checklist is attached as Appendix C of this report.

The cost data in the Financial Plan provide an accurate accounting of costs incurred to date and include a realistic estimate of future costs based on engineers' estimates and expected construction and right-of-way cost escalation factors. While the estimates of financial resources rely upon assumptions regarding future economic conditions and demographic variables, they represent realistic, estimates to fully fund the project.

We believe that the Financial Plan provides an accurate basis upon which to schedule and fund the 6th Street Seismic Safety Improvement Project. The City of Los Angeles will update the Financial Plan on an annual basis, beginning in November 2012, the year following the anticipated approval of the Financial Plan.

To the best of our knowledge, the Financial Plan as submitted herewith, fairly and accurately presents the financial position of the 6th Street Seismic Safety Improvement Project cash flows and expected conditions for the project's life cycle. The financial forecasts in the Financial Plan

[1] *"Administrative Draft for Caltrans Review, 6th Street Viaduct Seismic Improvement Project, Final Environmental Impact Report/Environmental Impact Statement and Section 4(f) Evaluation"*, California Department of Transportation (NEPA Lead Agency) and City of Los Angeles (CEQA Lead Agency), May, 2011.

are based on our judgment of the expected project conditions and our expected course of action.

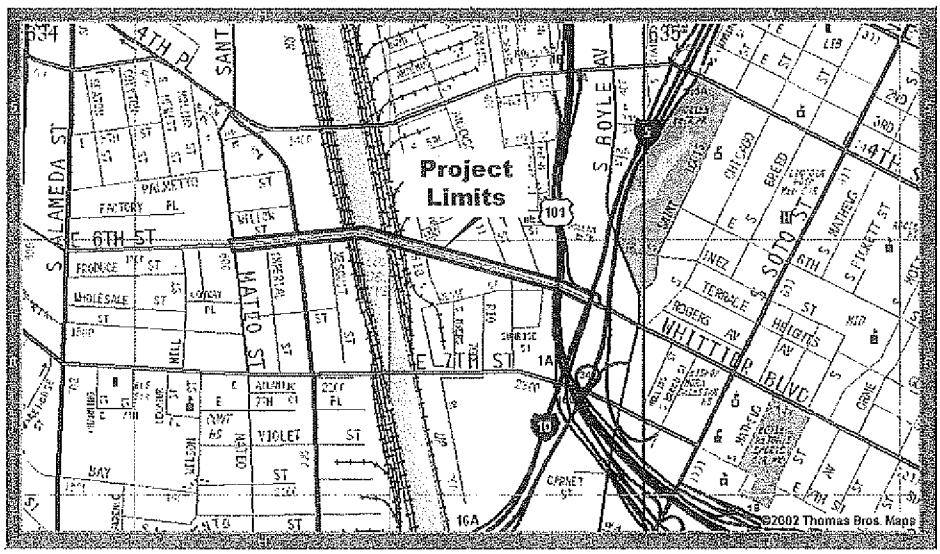
We believe that the assumptions underlying the Financial Plan are reasonable and appropriate. Further, we have made available all significant information that we believe is relevant to the Financial Plan and, to the best of our knowledge, the documents and records supporting the assumptions are appropriate.

1.3 Project Description and Location

The California Department of Transportation (Caltrans) and the City of Los Angeles (City) propose to undertake the replacement of the 6th Street Viaduct over the Los Angeles River (Bridge No. 53C-1880) and the 6th Street Overcrossing, which is a portion of the US 101 Hollywood Freeway (Bridge No. 53-0595). See Figure 1 for location map.

The 6th Street Viaduct and 6th Street Overcrossing comprise a single structure that spans a portion of the Hollywood Freeway (US 101), the Los Angeles River, city streets, and Union Pacific and Metrolink railroad tracks. The structure is located in a highly urbanized area just east of Downtown Los Angeles and connects Downtown Los Angeles on the west side of the river with the Boyle Heights community on the east side of the river.

An approximate 3,264-ft-long segment of the viaduct is owned by the City, and the 235-ft-long portion overcrossing US 101 is owned by Caltrans.



Thomas Bros Map
Los Angeles County Page 634, Grid H-6

Figure 1, Project Location Map

1.4 Purpose and Need

The purpose of the proposed project is to:

- Preserve 6th Street as a viable east-west link between Boyle Heights and Downtown Los Angeles;
- Reduce vulnerability of the 6th Street Viaduct in major earthquake events; and
- Resolve design deficiencies of the 6th Street Viaduct.

The 6th Street Viaduct was built in 1932. It is one of the oldest bridge structures in the state and spans more than 3500 feet. It is one of the longest bridges on the Prop 1B Seismic Match list in the highest population zone.

The 6th Street Bridge is one of the most vulnerable, locally owned bridges in California. Not only is it listed on Caltrans' mandatory seismic retrofit list, analyses performed indicate that this bridge has a 70% probability of failure for a design level earthquake within the next 50 years. An acceptable probability is 10% in 50 years. The probability increases every year due to concrete material deterioration from Alkali Silica Reaction (ASR) within the concrete.
Closure or collapse of this structure would have a major impact on transportation corridors.

The 6th Street Viaduct suffers from a condition known as ASR which is essentially a concrete "cancer" that over time weakens concrete's strength and limits the ability to retrofit the bridge to current standards. There are no known methods to reverse or stop the ASR attack to the existing structure. Laboratory testing indicates that deterioration due to ASR will continue, increasing the structure's vulnerability to collapse in a seismic event.

The city proposes to replace the structure to address the deficiencies stated above. In addition, the existing structure has geometric deficiencies, making the facility functionally obsolete.

1.5 Project Milestone Dates

The following activities have been completed on this project:

- Seismic Strategy Study
- Materials Study to characterize the ASR
- Technical Studies in Support of the Environmental Document
- Alignment Alternative evaluation including screening study
- Alternative Bridge Type evaluation including screening study
- Community outreach activities
- Bridge Advance Planning Study
- Preliminary ROW Relocation Report
- Preliminary Geotechnical and Foundation Report
- Preliminary Hazardous Materials Study
- Preliminary Roadway Design
- Administrative Draft Final EIR/EIS document

The following are the project milestone dates based on the design/bid/build method of delivery:

- Project Approval and Environmental Document (PA&ED) Nov 2011
- Completion of PS&E Jun 2014
- Right of Way Certification Sep 2014
- Ready to Advertise – Demolition and Bridge Construction Jul 2014
- Begin Construction - Demolition and Bridge Construction Jan 2015
- End Construction Dec 2017

2. COST ESTIMATE

This document represents the Initial Financial Plan for the 6th Street Viaduct Project. Per FHWA guidance, this cost estimate is in the year of expenditure dollars that already takes inflation into account.

The cost estimates presented in this report are for present day capital costs (end of 2007), using 10% mobilization, 25% for construction contingencies and 42% for escalation to midyear of construction. Right-of-way costs assume a 10% escalation and 20% contingency.

The capital cost estimates for various project alternatives, as outlined in Chapter 2 of the Project environmental document, range from $199 million for the Retrofit Alternative (30 year design life) to $409 million for the most costly bridge concept and alignment under the Replacement Alternative (75 year design life). The Project Financial Plan is developed using a Preferred Replacement Alternative budget amount of $401 million, which would include capital, soft and financial costs as detailed in Table 1.

2.1 Cost Estimate by Construction Segment

Design/Bid/Build (DBB) is proposed for this project as it will protect the currently planned funding. The planned funding sources for this project, including reimbursement of financing costs, are:

Federal Highway Bridge Program (HBP) Funds	$365.6 million
Proposition 1B Bridge Seismic (LBSRA) Funds	$ 29.7 million
City Matching Funds	$ 5.5 million
Other State Funds	$ 0.2 million
Total	$401.0 million

By using a conventional Design-Bid-Build (DBB) approach, the earliest that construction could occur is January 2015. This schedule is driven by the following constraints:

- Historic structure, requiring long environmental documentation process
- Right-of-way impacts. ROW acquisition cannot begin until ROD is signed
- Railroad (RR) agreements need to be in place prior to demolition
- Utility coordination and agreement

Construction Packages for the 6th St Bridge - Design/Bid/Build Delivery Method

The recommended EIR/EIS alternative calls for the removal of the existing viaduct with a new viaduct being constructed along a new alignment. For the purposes of this financial plan, the preferred alternative, alignment 3B and bridge concept 4A (a 4-span extradosed concrete bridge over the LA River, with concrete box girder approach spans) was selected to establish program budgets.

For the establishment of project budgets, the City is considered one bid package for demolition and construction. However, early contracts may be developed and bid for:

- Demolition of existing building and utility relocation;
- Local roadway improvements and detour; and
- Demolition of existing viaduct.

A brief description of the pre-construction activities as well as each of the phases is described below using a design-bid-build delivery method considering one bid package.

- Preliminary Engineering/Environmental (PE) Activities
  - PE proceeded to prepare alternatives so that a staff preferred alternative could be selected in September 2009. Environmental documentation proceeds toward a ROD in November 2011.
  - PS&E preparation begins in January 2012, shortly after the Record of Decision. PS&E would be completed by June, 2014 and final bid documents, permits and right of way clearances completed by the end of September 2014.
- Final Design Activities
  - Utilizing Final PS&E, the construction bid package would be advertised in July 2014, with construction award in January 2015.
- ROW and Utility Activities
  - ROW acquisition work commences after ROD. RR agreements and utility coordination to be completed by September 2014.
- Construction Activities
  - Construction is anticipated to begin in January 2015 with completion by December 2017.
  - Contractor mobilization and construct detour.
  - Construction of viaduct to be phased with demolition operations (existing building and existing viaduct).

The City is exploring other innovative delivery options, including Construction Manager/General Contractor at Risk (CM at Risk or CM/GC), which is described below.

Construction Manager/General Contractor at Risk (CM at Risk or CM/GC)

Construction Manager/General Contractor at Risk (CM at Risk, or CM/GC) is a specific contracting method utilizing an integrated "Team" approach applying modern management techniques to the planning, design, and construction of a project in order to control time, cost and risk, and to assure quality for the project owner. The "Team" consists of the Agency, an A&E firm (retained by the City), and the CM/GC (retained by the City). The CM/GC method includes both pre-construction and construction phase services.

Figure 2 shows the contractual relationships that would occur between the City, the A&E Firm and the GM/GC if the City chose to select this delivery method.

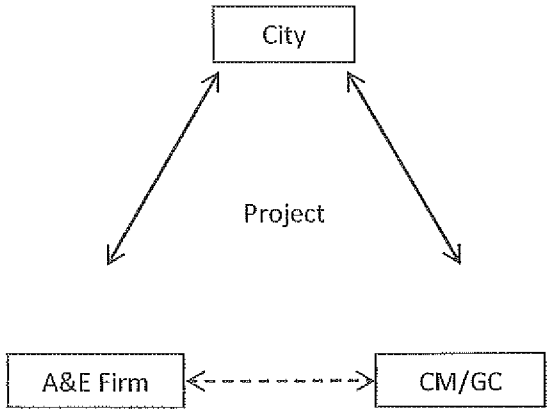


Figure 2, CM at Risk or GM/GC Project Delivery Method – Contractual Relationships

The aim of this project delivery method would be to engage at-risk construction expertise early in the design process to enhance constructability, manage risk, and facilitate concurrent execution of design and construction without the owner relinquishing control over the details of design as it might occur in a design-build project.

The procurement process would be managed as follows:

- The A&E firm is selected using the standard consultant qualification-based selection process.
- The CM/GC is selected using a qualification-based, Request for Proposal (RFP) process. During the end of the design process, the contractor then provides the owner with a "guaranteed maximum price", which the owner can accept, negotiate or re-bid, if unacceptable.

The CM at Risk method, if selected, would complete design and construction under two separate contracts issued by the City, but creates intentional points of contact between the engineer and the contractor to encourage collaboration and gain insight during design, and provide constructability reviews early enough in design development to add value to the project. This model offers the owner management latitude to gain the benefits offered by design-build delivery while maintaining nearly the same level of control over design and construction offered by traditional delivery methods.

2.2 Cost Estimate by Major Project Element

Table 1 shows the current cost estimate by major element of the project. The major elements are comprised of:

- Soft costs for preliminary design and preparation of Project Report and Environmental Document.
- Soft cost for preparation of plans, specifications, and estimate, as well as services to secure required right-of-way (ROW).
- Soft cost for construction services, including construction contract administration and inspection.
- Capital cost for ROW, secure parcels and easements and utility relocation.
- Capital cost for detour, demolition and reconstruction of the viaduct
- Financing costs (to be reimbursed by Highway Bridge Program (HBP) funds, matched by Proposition 1B funds).

TABLE 1 – ESTIMATED COSTS BY MAJOR PROJECT ELEMENT

PROJECT PHASE	COST (escalated)
PA & ED (Project Approval and Environmental Doc)	$ 17,136,356
Final Design (Plans, Spec. & Estimates)	20,000,000
Subtotal, PA, ED, Final Design	**37,136,356**
ROW (Right of Way)	98,605,000
Financing Costs	5,968,871
Subtotal, ROW	**104,573,871**
Detour and Demo of Existing Viaduct	12,083,627
Reconstruction of Viaduct	220,008,033
CE (Construction Support)	25,000,000
Financing Costs	2,194,340
Subtotal, Construction	**259,286,000**
Total Project Cost	**$ 400,996,227**

3. IMPLEMENTATION PLAN

Figure 3 identifies the permits, reviews and approvals that would be required for project construction

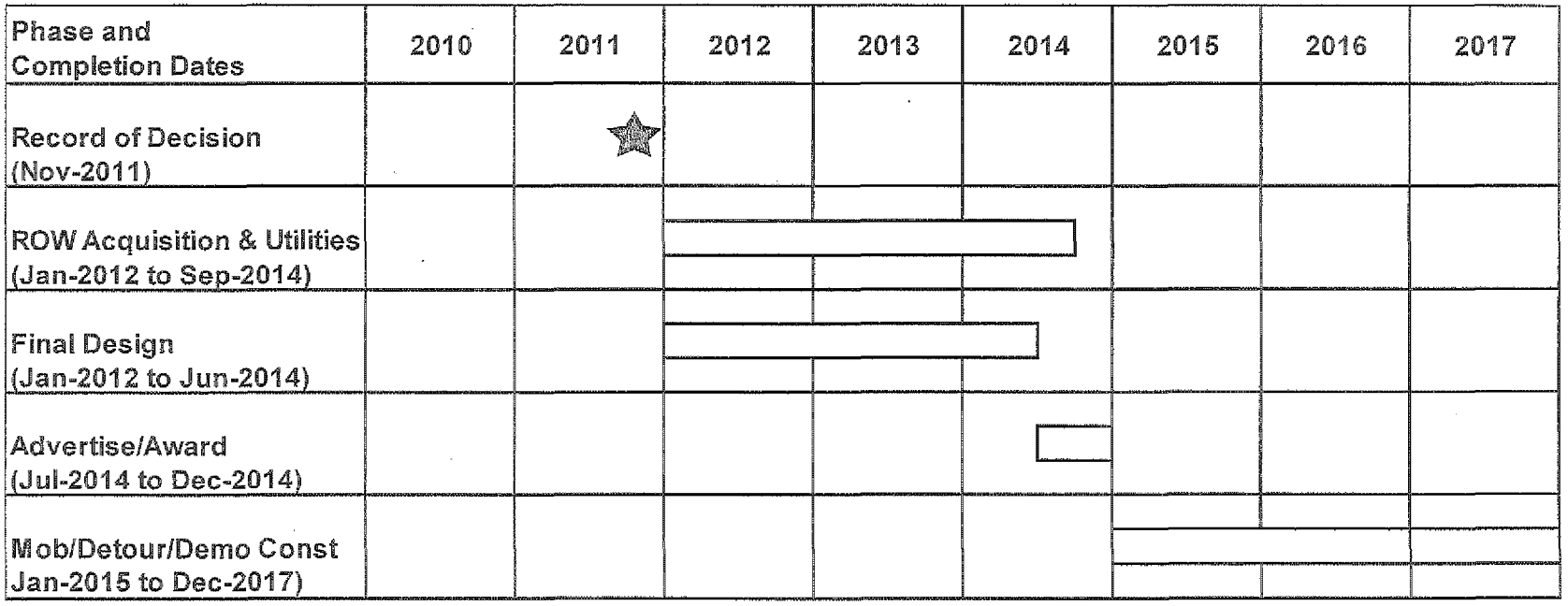
Figure 4 shows the project timeline by calendar year using the Design/Bid/Build delivery method. As of August 2011, the PA&ED phase is in the final stages of being complete and the PS&E phase is anticipated to begin in January 2012.

Table 2, Appendix A, shows the actual expenditures through January 2009, and the budgeted expenditures, by project phase and fund source, respectively, for the remainder of the project through construction completion in FFY 2017-18. Tables 2A – 2D, Appendix A, show the costs and funding by each phase, including the financing needs and costs for the ROW and Construction phases. Updates to this Financial Plan will compare expenditures to this baseline projection of project costs. The project continues to make substantial progress and construction is expected to begin January 2015.

Figure 3, Agency / Permit / Approval

Agency	Permit/Approval
U.S. Army Corps of Engineers (USACE)	Section 404 Permit for possible discharge of dredged or fill material into the Los Angeles River
State Historic Preservation Officer (SHPO)	Section 106 consultation and agreement document to resolve the adverse effect to the historic 6th Street Viaduct
Los Angeles Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification for work in the Los Angeles River Channel
RWQCB	Groundwater Dewatering Permit for discharges of groundwater from construction and project dewatering to surface waters in the watersheds of Los Angeles
California Department of Fish and Game (CDFG)	Section 1602 Agreement for Streambed Alteration
California Public Utilities Commission (PUC) Rail Crossing Engineering Section (RCES)	Rail crossing construction or alteration authorization
Caltrans	Encroachment Permit
All railroad agencies owning and operating railroad tracks along both sides of the Los Angeles River	Railroad Maintenance Agreement for work within railroad ROW

Figure 4, Project Timeline (Calendar Year)



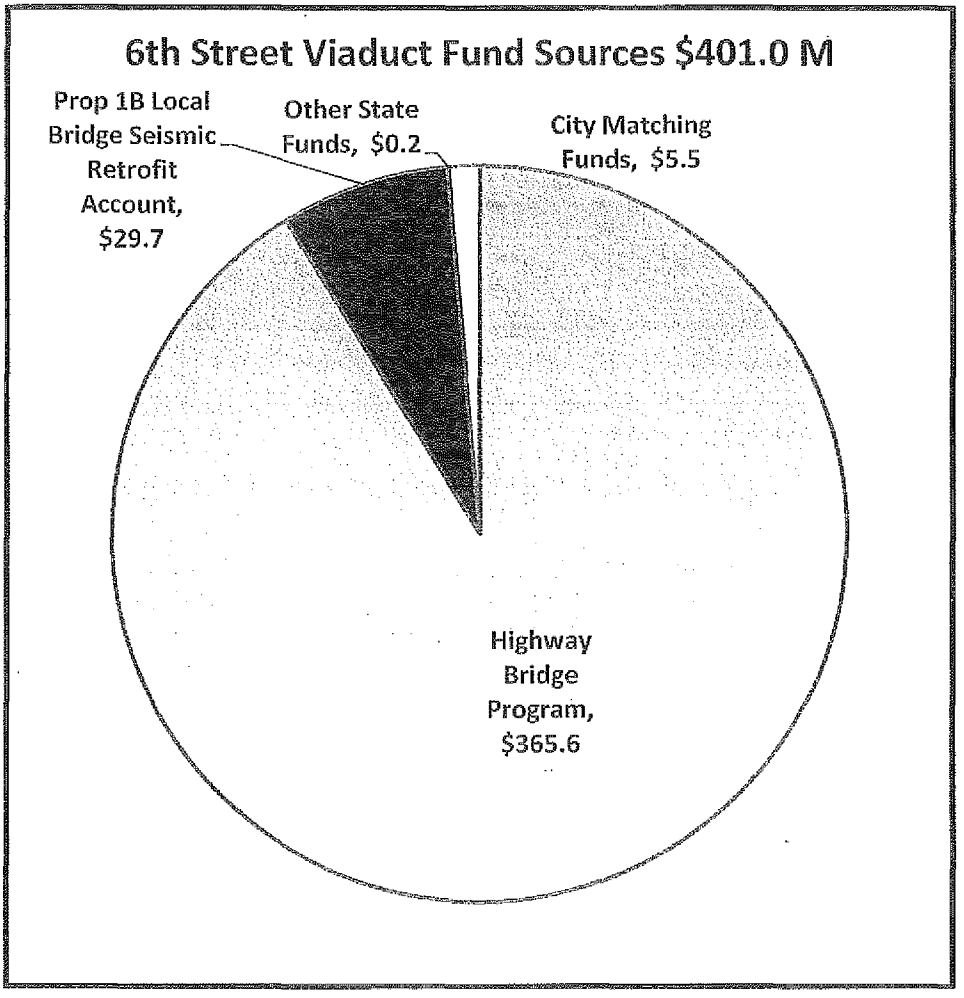
ATTACHMENT NO. FOUR

4. PROJECT FINANCING AND REVENUES

4.1 Overall Financial Plan

The project is fully funded for this amount using local, regional, state and federal funds, plus financing required for cash flow needs which will be repaid by HBP funds matched by Proposition 1B funds. For the ROW phase, toll credits will be used in place of local or state match. The funding sources and amounts are shown in Figure 5 below. Detailed charts are included in Appendix A.

Figure 5, Funding Sources In $ Millions



ATTACHMENT NO. FOUR

4.2 Description of Funding Sources

The funding sources identified for this $401 million project include:

- Highway Bridge Program (HBP) funds – These are federal funds that are apportioned by formula to the states. Caltrans then programs these funds to the various bridge projects in the state. The City of Los Angeles has received programmed approval from Caltrans for $365.6 million in HBP funds, including financing costs.
- Toll Credits - For the ROW phase, Caltrans has approved the use of Transportation Development Credits (TDC) known as "toll credits" for the match for the ROW phase, which increases the federal HBP funds to 100% for that phase. The toll credit amounts, which are not included in the totals, are listed on Table 2 and Table 2c.
- Proposition 1B Local Bridge Seismic Retrofit Account (LBSRA) – These funds are part of the $20 billion Proposition 1B passed by California voters in November 2006. The LBSRA account provides $125 million for the 11.5 percent required match for the federal HBP Fund for the Local Seismic Bridge Retrofit Program projects. The City of Los Angeles 6th Street Viaduct Seismic Improvement Project is eligible and has been approved by Caltrans for these funds.

  The California Transportation Commission (CTC) approved the Caltrans March 9, 2007, list of eligible Proposition 1B LBSRA projects, and the 6th Street project was included on that list. The Proposition 1B LBSRA funds are used to match the federal Highway Bridge Program match requirement, except for the ROW phase.

  The resulting total of Proposition 1B LBSRA funds for this project is $29.7 million, including financing costs.
- Other State Funds – Previous funding included $200,000 of state funds (primarily state gas tax funds).
- City Matching Funds – These funds, totaling $5.5 million, include City of Los Angeles Proposition C 25-percent Local Return funds, which are a component of the Los Angeles County Proposition C half-cent sales tax measure allocated by formula to the cities within Los Angeles County. The other City matching fund source is Proposition G, the City of Los Angeles' seismic bond funds. An additional local funding source is Measure R, which is the ½ cent sales tax enacted in November 2008 for the Los Angeles County area. Measure R funds are allocated to each City and the County, including the City of Los Angeles, based on a formula called Local Return.
- Financing – The City of Los Angeles will issue commercial paper financing to cover the needed cash flow, principally because the reimbursement of HBP and/or Proposition 1B funds may be delayed. According to Caltrans, Grant Anticipation Revenue Vehicles (GARVEE) bonds are not a viable option at this time. Per Section 122 of Title 23 *United State Codes* (U.S.C), the principle and financing costs would be reimbursed by the HBP funds, matched by Proposition 1B funds. [2].

[2] Section 122 of Title 23 U.S.C. - Bond-related costs now eligible for Federal-aid reimbursement include interest payments, retirement of principal, and any other cost incidental to the sale of an eligible bond issue.

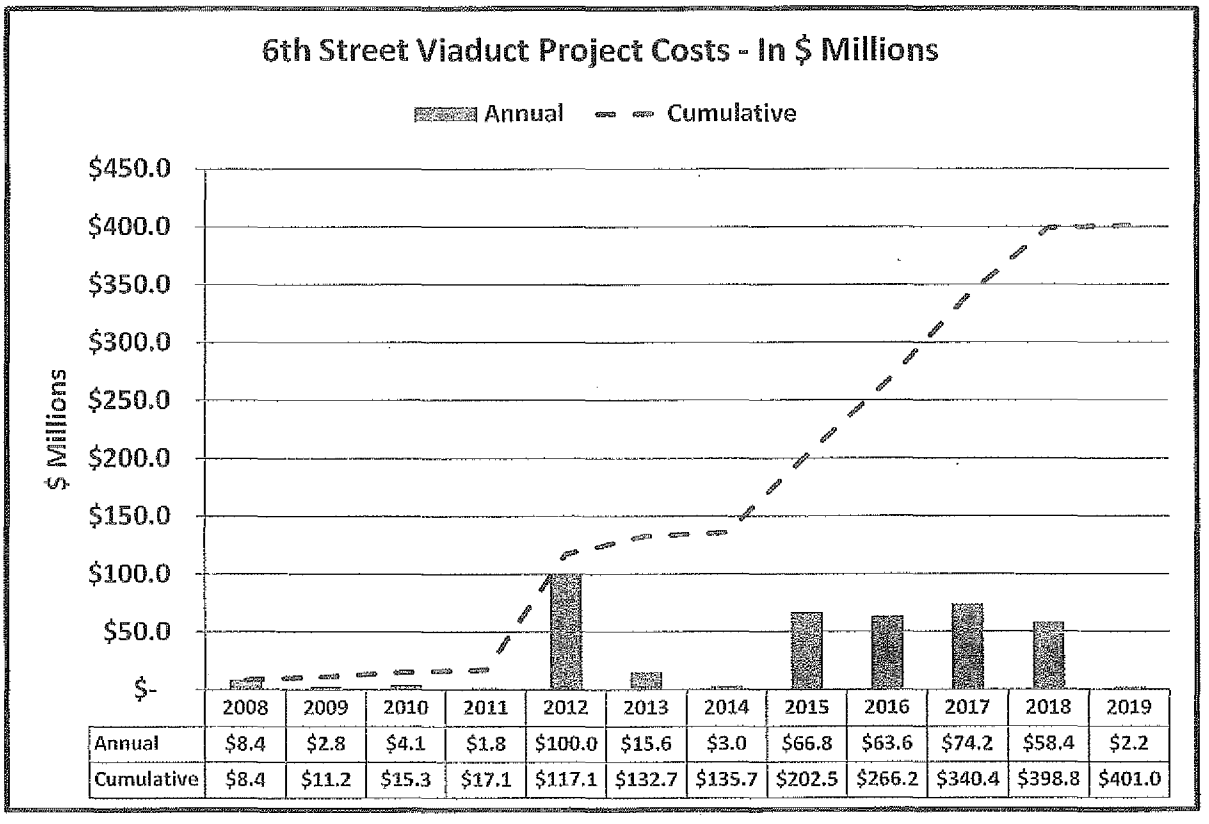
5. CASH FLOW AND CONTINGENCY FUND

A project cash flow summary, depicting annual and cumulative costs, is shown in Figure 6. This cash flow includes a 25% contingency.

The cash flow Tables 2 – 4 are included in Appendix A. Table 2 shows the cash flow including the project expenditures by project phase by year, as well as the funding by year. Tables 2A – 2D show the cash flow by each phase. Table 3 shows the funding sources by year and Table 4 shows the funding sources by phase.

The cash flow Tables 2 and 2A-2D also illustrate the local financing required to fund the cash flow needs. Local financing is required because of the programmed delay in the HBP and Proposition 1B funds during the ROW and construction phases. The City will use commercial paper financing to keep the project cash flow on schedule.

Figure 6, Annual and Cumulative Funding Requirements In $ Millions



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Annual	$8.4	$2.8	$4.1	$1.8	$100.0	$15.6	$3.0	$66.8	$63.6	$74.2	$58.4	$2.2
Cumulative	$8.4	$11.2	$15.3	$17.1	$117.1	$132.7	$135.7	$202.5	$266.2	$340.4	$398.8	$401.0

ATTACHMENT NO. FOUR

6. RISK IDENTIFICATION AND MITIGATION FACTORS

Risk management planning has been initiated during the preliminary engineering and environmental documentation phase. Risk management planning is the process of deciding how to approach and conduct the risk management activities for the project. Planning of risk management processes is important to ensure that the level, type, and visibility of risk management are commensurate with both the risk and importance of the project to the City, to provide sufficient resources and time for risk management activities.

For the purposes of this Financial Plan, risks have been identified (Risk Register) and strategies to address these risks have been grouped into categories of:

- Acceptance;
- Avoidance;
- Mitigation; and
- Transfer.

The Risk Register, shown in Appendix B, identifies risks that might affect the project's ability to achieve its objectives. Major risk types for this project can be separated into the general categories that include:

- Schedule;
- Funding;
- Right-of-Way;
- Construction;
- Stakeholders; and
- Design.

A quantitative risk analysis was not conducted during the preliminary engineering and environmental documentation phase. The cost established for the project budget includes contingency and escalation cost, but risk cost is not part of the total budget established within the Financial Plan.

6.1 Independent Verification of Bridge and Roadway Cost Estimate

An independent cost estimate was made for selected bridge concepts. The scope of work of this cost estimate study was to independently develop unit prices and generate quantities for the given list of bid items and preliminary plans (15% complete). In determining the independent structural cost estimates, two methods were used, namely:

- Using the designer's quantity take-offs and independently applying a unit cost for each item; and
- Independently determining quantities and applying independent unit cost for each item.

A summary of the estimates made by the designers and independent check is shown in Figure 7 (contingency and escalation costs are not included in these estimates) for the Preferred Replacement Alternative (Bridge Concept 4A). The Roadway Cost given below also included the Utility Cost which were included as part of the Right-of-Way costs within this Financial Plan. The independent cost estimate was approximately 4% lower than the designer's estimate. For the purposes of this Financial Plan, the designer's cost estimate was used.

Figure 7, Independent Verification of Costs Summary ($'s)

Summary of Estimates	Structural Cost Concept 4A	Roadway Cost
Designer's Estimate	$103,799,000	$43,460,000
Independent Estimate (Unit Prices)	$96,851,000	$44,976,000
Independent Estimate (Unit Prices and Quantities)	$96,153,000	n/a

6.2 Independent Review and Verification of Right of Way Costs

The cost of ROW in the Financial Plan is $98,605,000, based on Alignment 3B, Bridge Type 4A, the Preferred Replacement Alternative. With the planned financing costs, the total ROW cost is $104,573,871. The ROW cost information presented in this report is based on information available through the County and the City of Los Angeles on-line data bases which provide parcel information, cadastral maps, business information, and market data sources.

The ROW costs shown in Figure 8 represent the consensus of the independent analysis and verification by the City. For each replacement alignment, five bridge types or concepts were considered to establish ROW cost for the various combinations of alignment and bridge type. The analysis calculated the area for each of the easement types and cost criteria was based on 2007-2008 market conditions. The City's market survey and analysis indicate that the current market conditions of the project area more closely resemble the market as it was in 2007-2008 due to economic downturn in state's real estate market.

Figure 8, Independent Review and Verification of ROW Costs Summary ($'s)

Bridge Alignment/Concept	3A/1~3	3A/4~5	3B/1~3	3B/4~5	3C/1~3	3C/4~5
R/W Acquisition Costs	$37,902,256	$39,122,389	$43,870,204	$44,632,782	$33,198,219	$34,414,105
Utility Relocation Costs	$12,584,250	$12,584,250	$12,584,250	$12,584,250	$12,584,250	$12,584,250
Relocation Assistance	$4,350,000	$3,950,000	$4,550,000	$4,550,000	$2,800,000	$2,800,000
Clearance/ Demolition	$1,763,856	$1,613,136	$1,927,656	$1,927,656	$1,199,184	$1,198,944
Title & Escrow Fees	$100,500	$100,500	$100,500	$106,500	$100,500	$100,500
Sub-Total:	$56,700,862	$57,370,275	$63,032,610	$63,801,188	$49,882,153	$51,097,799
Escalation	$5,670,086	$5,737,028	$6,303,261	$6,380,119	$4,988,215	$5,109,780
Sub-Total:	$62,370,948	$63,107,303	$69,335,871	$70,181,307	$54,870,368	$56,207,579
Contingency	$12,474,190	$12,621,461	$13,867,174	$14,036,261	$10,974,074	$11,241,516
Sub-Total:	$74,845,138	$75,728,763	$83,203,045	$84,217,568	$65,844,442	$67,449,095
LABSS Facility	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000
Railroad Impacts	$13,419,000	$12,887,000	$13,419,000	$12,887,000	$13,419,000	$12,887,000
Total:	**$89,764,138**	**$90,115,763**	**$98,122,045**	**$98,604,568**	**$80,763,442**	**$81,836,095**
Rounded:	**$89,765,000**	**$90,116,000**	**$98,123,000**	**$98,605,000**	**$80,764,000**	**$81,837,000**

ATTACHMENT NO. FOUR

7. EXECUTIVE LEADERSHIP ENDORSEMENT

The undersigned hereby agree to support and abide by the guiding principles established in this document.

_____ _____

Gary Lee Moore, P.E. Date
City Engineer, Bureau of Engineering
City of Los Angeles

_____ _____

Michael Miles, District 7 Director Date

California Department of Transportation

APPENDIX A - FINANCIAL CHARTS
6TH STREET VIADUCT SEISMIC IMPROVEMENT PROJECT
TABLE 2 – CASH FLOW AND FINANCING REQUIREMENTS – ALL PHASES

All Phases Costs and Funding	Fiscal Year											
Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
PA/ED (Proj Approval and Envir Doc)	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 17,136,356
Final Design (PS&E)	-	-	-	-	10,000,000	10,000,000	-	-	-	-	-	-	20,000,000
Subtotal, PA/ED and PS&E --->	8,438,785	2,763,245	4,114,326	1,820,000	10,000,000	10,000,000	-	-	-	-	-	-	37,136,356
ROW (Right of Way)	-	-	-	-	90,000,000	5,605,000	3,000,000	-	-	-	-	-	98,605,000
ROW Financing Costs	-	-	-	-	-	-	-	5,968,871	-	-	-	-	5,968,871
Subtotal, ROW --->	-	-	-	-	90,000,000	5,605,000	3,000,000	5,968,871	-	-	-	-	104,573,871
CONSTRUCTION COST (CON)													
Detour and Demo of Existing Viaduct	-	-	-	-	-	-	-	12,083,627	-	-	-	-	12,083,627
Reconstruction of Viaduct	-	-	-	-	-	-	-	43,035,955	57,381,274	66,944,819	52,645,985	-	220,008,033
CE (Construction Support)	-	-	-	-	-	-	-	5,707,853	6,255,269	7,297,814	5,739,064	-	25,000,000
Construction Financing Costs	-	-	-	-	-	-	-	-	-	-	-	2,194,340	2,194,340
Subtotal, Construction and CE--->	-	-	-	-	-	-	-	60,827,435	63,636,543	74,242,633	58,385,049	2,194,340	259,286,000
Total Project & Financing Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ 100,000,000	$ 15,605,000	$ 3,000,000	$ 66,796,306	$ 63,636,543	$ 74,242,633	$ 58,385,049	$ 2,194,340	$ 400,996,227
FUNDING													
Highway Bridge Program (HBP) - PA/ED/PS&E	$ 6,751,028	$ 2,210,596	$ 3,291,461	$ 1,456,000	$ 8,853,000	$ 8,853,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 31,415,085
Highway Bridge Program (HBP) - ROW	-	-	-	-	22,598,870	22,598,870	22,598,870	16,629,999	14,178,391	-	-	-	98,605,001
Highway Bridge Program (HBP) - Construction	-	-	-	-	-	-	-	50,000,000	50,000,000	50,000,000	50,000,000	27,633,005	227,633,005
Highway Bridge Program (HBP) - Financing Costs	-	-	-	-	-	-	-	5,968,871	-	-	-	1,941,991	7,910,862
Subtotal, HBP Funds --->	6,751,028	2,210,596	3,291,461	1,456,000	31,451,870	31,451,870	22,598,870	72,598,870	64,178,391	50,000,000	50,000,000	29,574,996	365,563,952
Prop 1B Local Bridge Seismic Retrofit- ROW	-	-	-	-	-	-							-
Prop. 1B Local Bridge Seismic Retrofit- Const							-	6,497,175	6,497,175	6,497,175	6,497,175	3,469,954	29,458,655
Prop 1B Local Bridge Seismic Retrofit- Financing Costs								-	-	-	-	252,349	252,349
Subtotal, Prop 1B Funds --->	-	-	-	-	-	-	-	6,497,175	6,497,175	6,497,175	6,497,175	3,722,303	29,711,004
Other State Funds	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000
City Matching Funds	1,487,757	552,649	822,865	364,000	1,147,000	1,147,000	-	-	-	-	-	-	5,521,271
													-
Total Funding	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ 32,598,870	$ 32,598,870	$ 22,598,870	$ 79,096,045	$ 70,675,566	$ 56,497,175	$ 56,497,175	$ 33,297,299	$ 400,996,227
Local Financing	-	-	-	-	67,401,130	-	-	4,330,260	7,139,366	17,745,458	1,887,874	-	98,504,089
Payback of Local Financing	-	-	-	-	-	16,993,870	19,598,870	16,629,999	14,178,391	-	-	31,102,959	98,504,090
Cumulative Balance	$ -	$ -	$ -	$ -	$ 67,401,130	$ 50,407,260	$ 30,808,390	$ 18,508,650	$ 11,469,627	$ 29,215,085	$ 31,102,959	$ (0)	$ (0)
Project Costs	8,438,785	2,763,245	4,114,326	1,820,000	100,000,000	15,605,000	3,000,000	60,827,435	63,636,543	74,242,633	58,385,049	-	392,833,016
Financing Costs-Interest Only*	-	-	-	-	-	-	-	5,968,871	-	-	-	2,194,340	8,163,211
Total Project & Financing Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ 100,000,000	$ 15,605,000	$ 3,000,000	$ 66,796,306	$ 63,636,543	$ 74,242,633	$ 58,385,049	$ 2,194,340	$ 400,996,227

* Financing costs (interest and issuance costs) from local bonds/financing will be reimbursed by HBP funds, matched by Prop. 1B funds (issuance costs not calculated but actual issuance costs would be reimbursed).

Toll Credits for ROW Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Transpor. Development Credits (TDC) -Toll Credits (not included in totals)				-	2,598,870	2,598,870	2,598,870	2,598,870	1,630,515		-		12,025,995

ATTACHMENT NO. FOUR

TABLE 2A – CASH FLOW AND FINANCING REQUIREMENTS – PA/ED PHASE

PA/ED Costs and Funding	Fiscal Year												
Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
PA/ED (Proj Approval and Envir Doc)	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000									$17,136,356
Final Design (PS&E)													-
Subtotal, PA/ED and PS&E —>	8,438,785	2,763,245	4,114,326	1,820,000	-	-	-	-	-	-	-		17,136,356
ROW (Right of Way)													-
Subtotal, ROW —>				-	-	-							-
CONSTRUCTION COST (CON)													
Detour and Demo of Existing Viaduct													-
Reconstruction of Viaduct													-
Subtotal, Construction —>							-	-	-	-	-	-	-
CE (Construction Support)													
Subtotal, Construction and CE—>													
Total Project Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$17,136,356
Funding													
Highway Bridge Program (HBP) - PA/ED/PS&E	$ 6,751,028	$ 2,210,596	$ 3,291,461	$ 1,456,000	$ -	$ -							$13,709,085
Highway Bridge Program (HBP) - ROW													-
Highway Bridge Program (HBP) - Construction													-
Subtotal, HBP Funds —>	$ 6,751,028	$ 2,210,596	$ 3,291,461	$ 1,456,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$13,709,085
Prop 1B Local Bridge Seismic Retrofit							-	-	-	-	-		-
Other State Funds	200,000												200,000
City Matching Funds	1,487,757	552,649	822,865	364,000	-	-							3,227,271
													-
Total Funding	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$17,136,356

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TABLE 2B – CASH FLOW AND FINANCING REQUIREMENTS – FINAL DESIGN PHASE

Final Design Costs and Funding	Fiscal Year												
Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
PA/ED (Proj Approval and Envir Doc)													
Final Design (PS&E)					10,000,000	$ 10,000,000							20,000,000
Subtotal, PA/ED and PS&E —>	$ -	$ -	$ -	$ -	$ 10,000,000	$ 10,000,000	$ -	$ -	$ -	$ -			$ 20,000,000
ROW (Right of Way)													-
Subtotal, ROW —>				-	-	-							-
CONSTRUCTION COST (CON)													
Detour and Demo of Existing Viaduct													-
Reconstruction of Viaduct													-
Subtotal, Construction —>							-	-	-	-		-	-
CE (Construction Support)													
Subtotal, Construction and CE—>													
Total Project Costs	$ -	$ -	$ -	$ -	$ 10,000,000	$ 10,000,000	$ -	$ -	$ -	$ -		$ -	$ 20,000,000
Funding													
Highway Bridge Program (HBP) - PA/ED/PS&E				$ -	$ 8,853,000	$ 8,853,000							$ 17,706,000
Highway Bridge Program (HBP) - ROW													-
Highway Bridge Program (HBP) - Construction													-
Subtotal, HBP Funds—>	$ -	$ -	$ -	$ -	$ 8,853,000	$ 8,853,000	$ -	$ -	$ -	$ -		$ -	$ 17,706,000
Prop 1B Local Bridge Seismic Retrofit							-	-	-	-			-
Other State Funds													-
City Matching Funds				-	1,147,000	1,147,000							2,294,000
													-
Total Funding	$ -	$ -	$ -	$ -	$ 10,000,000	$ 10,000,000	$ -	$ -	$ -	$ -		$ -	$ 20,000,000
Subtotal Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -

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TABLE 2C – CASH FLOW AND FINANCING REQUIREMENTS – ROW PHASE

Right-of-Way Costs and Funding	Fiscal Year												
Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
PA/ED (Proj Approval and Envir Doc)													$ -
Final Design (PS&E)													-
Subtotal, PA/ED and PS&E —>	-	-	-	-	-	-	-	-	-	-	-	-	-
ROW (Right of Way)					90,000,000	5,605,000	3,000,000						98,605,000
Subtotal, ROW —>					90,000,000	5,605,000	3,000,000						98,605,000
ROW Financing Costs								5,968,871					5,968,871
Subtotal, ROW & Financing —>	-	-	-	-	90,000,000	5,605,000	3,000,000	5,968,871	-	-	-	-	104,573,871
CONSTRUCTION COST (CON)													
Detour and Demo of Existing Viaduct													-
Reconstruction of Viaduct													-
Subtotal, Construction —>	-	-	-	-	-	-	-	-	-	-	-	-	-
CE (Construction Support)													
Subtotal, Construction and CE—>	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Costs	$ -	$ -	$ -	$ -	$ 90,000,000	$ 5,605,000	$ 3,000,000	$ 5,968,871	$ -	$ -	$ -	$ -	$ 104,573,871
Funding													
Highway Bridge Program (HBP) - PA/ED/PS&E				-	-	-							
Highway Bridge Program (HBP) - ROW					22,598,870	22,598,870	22,598,870	16,629,999	14,178,391				98,605,001
Highway Bridge Program (HBP) - Construction													-
Highway Bridge Program (HBP) - Financing Costs								5,968,871					5,968,871
Subtotal, HBP Funds —>	$ -	$ -	$ -	$ -	$ 22,598,870	$ 22,598,870	$ 22,598,870	$ 22,598,870	$ 14,178,391	$ -	$ -	$ -	$ 104,573,871
Prop 1B Local Bridge Seismic Retrofit				-						-	-		-
Other State Funds													-
City Matching Funds													-
													-
Total Funding	$ -	$ -	$ -	$ -	$ 22,598,870	$ 22,598,870	$ 22,598,870	$ 22,598,870	$ 14,178,391	$ -	$ -	$ -	$ 104,573,871
Subtotal Balance - need to finance	$ -	$ -	$ -	$ -	$ (67,401,130)	$ 16,993,870	$ 19,598,870	$ 16,629,999	$ 14,178,391	$ -	$ -	$ -	$ 1
Local Financing	-	-	-	-	67,401,130	-	-	-	-	-	-	-	67,401,130
Payback of Local Financing	-	-	-	-	-	16,993,870	19,598,870	16,629,999	14,178,391	-	-	-	67,401,130
Cumulative Balance	$ -	$ -	$ -	$ -	$ 67,401,130	$ 50,407,260	$ 30,808,390	$ 14,178,391	$ (1)	$ (1)	$ (1)	$ (1)	$ (1)

Prop 1B Local Bridge Seismic Retrofit changed to Toll Credits for HBP funds. Therefore HBP funds are now 100% Federal.

Financing Costs	NOTE: Financing cost estimated on annual, not monthly basis. Assumes payback at end of fiscal year. Also, loan origination costs although eligible for reimbursement.
	Series 2012
Principle >	$ 67,401,130
Interest APR >	2.2%

Financing Costs (Interest Only)>					$ 1,492,218	$ 1,492,218	$ 1,492,218	$ 1,492,218					$ 5,968,872
Total Financing Costs					$ 1,492,218	$ 1,492,218	$ 1,492,218	$ 1,492,218	$ -	$ -	$ -	$ -	$ 5,968,871

Toll Credits for ROW Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Transpor. Development Credits (TDC) -Toll Credits (not included in totals)				-	2,598,870	2,598,870	2,598,870	2,598,870	1,630,515		-		12,025,995

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TABLE 2D – CASH FLOW AND FINANCING REQUIREMENTS – CONSTRUCTION PHASE

Construction & CE Costs and Funding	Fiscal Year												
Phase	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
PA/ED (Proj Approval and Envir Doc)													$ -
Final Design (PS&E)													-
Subtotal, PA/ED and PS&E —>	-	-	-	-	-	-	-	-	-	-			-
ROW (Right of Way)													-
Subtotal, ROW —>				-	-	-							-
CONSTRUCTION COST (CON)													
Detour and Demo of Existing Viaduct								12,083,627					12,083,627
Reconstruction of Viaduct								43,035,955	57,381,274	56,944,819	52,646,985		220,008,033
Subtotal, Construction —>	-	-	-	-	-	-	-	55,119,582	57,381,274	56,944,819	52,646,985	-	232,091,660
CE (Construction Support)								5,707,853	6,255,269	7,297,814	5,739,064		25,000,000
Subtotal, Construction and CE—>	-	-	-	-	-	-	-	60,827,435	63,636,543	74,242,633	58,386,049	-	257,091,660
Construction Financing Costs												2,194,340	2,194,340
Subtotal, Construction, CE & Financing Costs—>	-	-	-	-	-	-	-	60,827,435	63,636,543	74,242,633	58,386,049	2,194,340	259,286,000
Total Project Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 60,827,435	$ 63,636,543	$ 74,242,633	$ 58,386,049	$ 2,194,340	$ 259,286,000
Funding													
Highway Bridge Program (HBP) - PA/ED/PS&E													
Highway Bridge Program (HBP) - ROW													-
Highway Bridge Program (HBP) - Construction								50,000,000	50,000,000	50,000,000	50,000,000	27,633,005	227,633,005
Highway Bridge Program (HBP) - Financing Costs												1,941,991	1,941,991
Subtotal, HBP Funds —>	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000,000	$ 50,000,000	$ 50,000,000	$ 50,000,000	$ 29,574,996	$ 229,574,996
Prop. 1B Local Bridge Seismic Retrofit- Const								6,497,175	6,497,175	6,497,175	6,497,175	3,469,954	29,458,655
Prop 1B Local Bridge Seismic Retrofit- Financing Costs												252,349	252,349
Prop 1B Local Bridge Seismic Retrofit	-	-	-	-	-	-	-	6,497,175	6,497,175	6,497,175	6,497,175	3,722,303	29,711,004
Other State Funds													-
City Matching Funds													-
Total Funding	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 56,497,175	$ 56,497,175	$ 56,497,175	$ 56,497,175	$ 33,297,299	$ 259,286,000
Subtotal Balance - need to finance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (4,330,260)	$ (7,139,368)	$ (17,745,458)	$ (1,887,874)	$ 31,102,959	$ (1)
Local Financing	-	-	-	-	-	-	-	4,330,260	7,139,368	17,745,458	1,887,874	-	31,102,959
Payback of Local Financing	-	-	-	-	-	-	-	-	-	-	-	31,102,959	31,102,959
Cumulative Balance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,330,260	$ 11,469,628	$ 29,215,086	$ 31,102,959	$ 1	$ 0

Financing Costs

NOTE: Financing cost estimated on annual, not monthly basis. Assumes payback at end of fiscal year. Also, loan origination costs although eligible for reimbursement, FY2019 Partial year only.

Series 2015													
Principle > $ 4,330,260													
Interest APR > 2.2%													
Financing Costs (Interest Only)>								$ 95,269	$ 95,269	$ 95,269	$ 95,269	$ 70,884	$ 454,361
Series 2016													
Principle > $ 7,139,368													
Interest APR > 2.2%													
Financing Costs (Interest Only)>									$ 156,061	$ 156,061	$ 156,061	$ 116,867	$ 581,050
Series 2017													
Principle > $ 17,745,458													
Interest APR > 2.2%													
Financing Costs (Interest Only)>										$ 392,873	$ 392,873	$ 290,483	$ 1,076,229
Series 2018													
Principle > $ 1,887,874													
Interest APR > 2.2%													
Financing Costs (Interest Only)>											$ 41,796	$ 30,903	$ 72,700
Total Financing Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 95,269	$ 253,330	$ 644,203	$ 688,000	$ 509,138	$ 2,194,340

TABLE 3 – CASH FLOW BY FUNDING SOURCE BY YEAR

Cash Flow by Funding Source by Year	Fiscal Year												
Funding Source	2007-08 & Prior	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2017-18	Total
Highway Bridge Program (HBP) - PA/ED/PS&E	$ 6,751,028	$ 2,210,596	$ 3,291,461	$ 1,456,000	$ 8,853,000	$ 8,853,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 31,415,085
Highway Bridge Program (HBP) - ROW	-	-	-	-	22,598,870	22,598,870	22,598,870	16,629,999	14,178,391	-	-	-	98,605,001
Highway Bridge Program (HBP) - Construction	-	-	-	-	-	-	-	50,000,000	50,000,000	50,000,000	50,000,000	27,632,100	227,632,100
Highway Bridge Program (HBP) - Financing Costs	-	-	-	-	-	-	-	5,968,871	-	-	-	1,942,896	7,911,766
Subtotal, HBP Funds —>	6,751,028	2,210,596	3,291,461	1,456,000	31,451,870	31,451,870	22,598,870	72,598,870	64,178,391	50,000,000	50,000,000	29,574,996	365,563,952
Prop 1B Local Bridge Seismic Retrofit- ROW	-	-	-	-	-	-	-	-	-	-	-	-	-
Prop. 1B Local Bridge Seismic Retrofit- Const	-	-	-	-	-	-	-	8,497,175	6,497,175	6,497,175	6,497,175	3,470,859	29,459,559
Prop 1B Local Bridge Seismic Retrofit- Financing Costs	-	-	-	-	-	-	-	-	-	-	-	251,445	251,445
Subtotal, Prop 1B Funds —>	-	-	-	-	-	-	-	6,497,175	6,497,175	6,497,175	6,497,175	3,722,303	29,711,004
Other State Funds	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000
City Matching Funds	1,487,757	552,649	822,865	364,000	1,147,000	1,147,000	-	-	-	-	-	-	5,521,271
													-
Total Funding	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ 32,598,870	$ 32,598,870	$ 22,598,870	$ 79,096,045	$ 70,675,566	$ 56,497,175	$ 56,497,175	$ 33,297,299	$ 400,996,227
Local Financing	-	-	-	-	67,401,130	-	-	4,330,260	7,139,368	17,745,456	1,887,874	-	98,504,089
Payback of Local Financing	-	-	-	-	-	16,993,870	19,598,870	16,629,999	14,178,391	-	-	31,102,959	98,504,090
Cumulative Balance	$ -	$ -	$ -	$ -	$ 67,401,130	$ 50,407,260	$ 30,808,390	$ 18,508,650	$ 11,469,627	$ 29,215,085	$ 31,102,959	$ (1,887,874)	$ (1,887,874)
Project Costs	8,438,785	2,763,245	4,114,326	1,820,000	100,000,000	15,605,000	3,000,000	60,827,435	63,636,543	74,242,633	58,385,049	-	392,833,016
Financing Costs-Interest Only*	-	-	-	-	-	-	-	5,968,871	-	-	-	2,194,340	8,163,211
Total Project & Financing Costs	$ 8,438,785	$ 2,763,245	$ 4,114,326	$ 1,820,000	$ 100,000,000	$ 15,605,000	$ 3,000,000	$ 66,796,306	$ 63,636,543	$ 74,242,633	$ 58,385,049	$ 2,194,340	$ 400,996,227

* Financing costs (interest and issuance costs) from local bonds/financing will be reimbursed by HBP funds, matched by Prop. 1B funds (issuance costs not calculated but actual issuance costs would be reimbursed).

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TABLE 4 – CASH FLOW BY FUNDING SOURCE BY PHASE

Cash Flow by Funding Source by Phase	Activity				
Funding Source	PA/ED/PS&E	ROW	CON & CE	Financing	Total
Highway Bridge Program (HBP) - PA/ED/PS&E	$ 31,415,085				$ 31,415,085
Highway Bridge Program (HBP) - ROW		98,605,001			98,605,001
Highway Bridge Program (HBP) - Construction & CE			227,632,100		227,632,100
Highway Bridge Program (HBP) - Financing Costs				7,911,766	7,911,766
					-
Prop 1B Local Bridge Seismic Retrofit- ROW & Const			29,459,559		29,459,559
Prop 1B Local Bridge Seismic Retrofit- Financing Costs				251,445	251,445
					-
Other State funds	200,000				200,000
City Matching	5,521,271				5,521,271
Total	$ 37,136,356	$ 98,605,001	$ 257,091,659	$ 8,163,211	$ 400,996,227

ATTACHMENT NO. FOUR

APPENDIX B - RISK ANALYSIS SUMMARY

OF THE

RISK MANAGEMENT PLAN DOCUMENT

FOR THE

6TH STREET VIADUCT SEISMIC IMPROVEMENT PROJECT

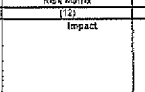
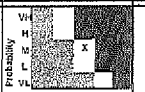
UPDATED March, 2010

ATTACHMENT NO. FOUR

PROJECT RISK MANAGEMENT PLAN - Sixth Street Viaduct

	Identification						Qualitative Analysis				OPTIONAL Quantitative Analysis			Response Strategy			Monitoring and Control		
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Threat/Opportunity Event	SMART Column	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact ($ or days)	Effect ($ or days) (15) = (13)x(14)	Strategy	Response Actions including advantages and disadvantages	Affected WBS Tasks	Responsibility (Task Manager)	Status Interval or Milestone Check	Date, Status and Review Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		(16)	(17)	(18)	(19)	(20)	(21)
	Active	1A	5/1/2004 PID	funding	Project funding. Project funding sources need to be defined and secured.	As of 3/1/2006 it appears that approximately 85% of the project can be funded under the FHWA HBP program, within this programs scope restrictions. As of Nov, 2007 it appears that the 11% will be funded under Prop 1B LSSRP within this programs scope restrictions. Other possible funding to cover items not cover by HBR and LSSRP includes, Prop C and G and MTA.	Funding obligations appear to be in place to cover the baseline project costs of $245 million. During the 4/06 submitted revised baseline cost to Caltrans in the amount of $307.3 million. During the 4q of 2006 the project cost for the preferred alignment 3B is $345M. Amount doesn't include financial costs.	Schedule Cost	Low	Very High		20%	0	0	Acceptance	MTA call for projects. LSSRP Bond funds have a set amount for entire program.		LA/DEA/MM/DEA	quarterly	1/2006 - FHWA funding to be allowed for viaduct portion over state right of way. MTA call for projects submitted. LSSRP includes 6th St, for local match. Update funding to Caltrans in June of 06. Funding update to Caltrans in the 4qt of 2006.
	Active	1B	5/9/2007 PA&ED	funding	Project funding through the LSSRP may not be available for the project. This represents approximately 11% of the total funding package.	GTC guidelines for LSSRP will provide funds based on a first come first serve, that is being ready to list/advertise a project for construction. As of the May, 2008, the LSSRP funds have been increase to approximately $145 million. However this amount may not cover all projects within the LSSRP.	If other major projects (Golden Gate Bridge retrofit, replacement ramps to I-80) within the LSSRP are ready for construction funding prior to 6th being ready for construction.	Schedule Cost	Low	moderate		30%	0	0	Acceptance	1) Investigate project delivery method of design build with City Risk Management Group. 2) Inform City Managers and Council Districts of potential funding threat. 3) Work with FHWA and Caltrans to allow preliminary design to move ahead prior to ROD. 4) Investigate other funding sources.		LA/HNTB/ DEA/CH2M/MIN	quarterly	In the 4th quarter of 2007, Item (1) was provided to the City Engineer for consideration. As of 1st quarter of 2008, it appears at the completion of the Advanced Planning & VE Studies an internal preferred alignment and bridge concept could be selected for the replacement alternative, if a preferred alternative becomes apparent, need to begin dialog with Caltrans and FHWA as strategy number 3.
	Active	1C	4/7/2009 PA&ED	funding	Bridge Loan for Cash Flow.	Project cash flow may require a bridge loan. Current sources have not been identified to provide a bridge loan.	The statewide HBRP program cannot meet cash flow requirements for all projects per schedule. The HBRP will reimburse interest payments to advance construction.	Schedule Cost	Very High	High		90%	0	0	Acceptance	City needs to identify bridging funds to advance construction. Measure R could be a source or other banks such as the Infrastructure Bank		City/HNTB	quarterly	The draft financial plan was complete 2/09.
	Active	2A	3/30/2006 PID	row	Right of Way, Right of Way Takes and Associated Cost along entire project, abutment to abutment.	The proposed width of the viaduct will require additional right of way. Depending upon the alignment, the right of way takes will change.	The current City right of way is almost already adjacent to the edge of the bridge deck. Replacement schemes will require additional right of way. Right of way costs need to be determined for various alignments in order to determine funding risks. Right of way costs varies from $52 million, $62 million, $42 million for alignment A, B and C.	Schedule Cost	Very High	High		90%	0	0	Acceptance	Need to determine if right of way costs are less by shifting the alignment to the north or south, (east side of river) and if partial ROW are acceptable.		MM/LA	quarterly	As of 5/08 right of way cost have been determine for alignment A, B and C. Cost include 10% for acquisition and 15% for contingencies. Can't perform detailed appraisal until after the ROD is signed. The preferred alignment 3B (modified) was set during the 1st qt of 2008 with associated row cost of $62M. This may be impacted with the new bridge type concept 1A.
	Retired	2B	4th Qt 08 PID	design	Right of Way, Right of Way Takes at the west end of the project between Santa Fe and Mateo Streets along the north side of the project may not be acquired prior to starting construction.	The proposed width of the viaduct will require additional right of way. If this right of way cannot purchased, the cut to cut bridge width would need to fit within the existing City ROW.	Construction bid package is prepared but ROW not secured by City.	Scope Cost	Low	Very High		0%	0	0	Acceptance	Contingency plan to consider reducing the roadway bid width and posting the pedway off the viaduct near Mesquite St. Bridge would require redesign for lost frame. This option would allow the construction to proceed until ROW is obtained. Bridge Concepts 1, 2, 3 and 4 would require approx 6 months to redesign and Concept 5 would require approx 12 months to redesign.		MM/DEA	quarterly	As of 2/2008, it appears that the pedway could be peeled off from the viaduct. Bridge Concept No. 4 is impacted the least of the 5 bridge concepts and Concept 5 the most. In the 4th qt of 2008 it was decided to use the design sequencing project delivery method to avoid this risk.
	Active	3	6/1/2004 PID	row	Relocation of City facility. City maintenance facility below viaduct located at west end of the project.	Prior to demo and during construction this facility will need to be relocated.	Need to have plan in place for relocation prior to construction. Current estimate ranges from 52 to 55 million as a functional relocation.	Schedule Cost	very high	moderate		90%	0	0	Acceptance	Risk must be accepted in order to maintain schedule and continue with development of design. City departments must consider options and opportunities in addressing this issue.		LA/MM/CH	quarterly	As of the 1Qt of 2008, Caltrans and FHWA will allow for the early relocation of the facility prior to construction (cover the relocation and RAW costs). Location is not known, but investigating a few sites. Need a early design in place. RELOCATE PRIOR TO ROD. Caltrans has indicated that the funding is not eligible under the HBRP to pay for the facility real estate. As of the 1 qt of 2009 the City (CAO) is looking at funding for this facility. Team should consider relocating to the Riekle Works or Ventura Food properties.
			6/1/2004					Schedule												2/2006 - City presented the project to SHPO for early consultation. Appears SHPO concurs with recommendation for replacement. Need to work with SHPO for historical mitigation. Team has also met with LA Conservancy. It appears the Conservancy understands the bridge

PROJECT RISK MANAGEMENT PLAN - Sixth Street Viaduct

	Identification							Qualitative Analysis				Optional Quantitative Analysis			Response Strategy			Monitoring and Control		
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Threat/Opportunity Event	SMART Column:	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability [%]	Impact ($ or days)	Effect ($ or days) [15]=[13]x[14]	Strategy	Response Actions including advantages and disadvantages	Affected WBS Tasks	Responsibility (Task Manager)	Status Interval or Milestone Check	Date, Status and Review Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	Active	4	PID	environmental	Removal of Historical Structure. Engineering studies have concluded replacement is the alternate to solve the ASR and seismic vulnerabilities.	SHPO & LA Conservancy may require additional studies to preserve the existing structure, or keeping the existing structure with the addition of a new structure at a different location.	Initial consultation with SHPO and LA Conservancy.	Scope	Very Low	moderate		10%	0	0	Acceptance	Consultation with SHPO & LA Conservancy to explain the existing condition of the structure, ASR and seismic safety issues in keeping the structure in place.		LA/PTC/DEA	quarterly	structural issues, but would like to exhaust all potential ways to solve the seismic and materials problems. As of 8/06 Team has engaged Eric Calzer to investigate different method for ASR treatment. A workshop was held with the public in 2003. It appears that replacement is acceptable to all stakeholds as of the 1st qt of 2006. SHPO is concerned about cumulative impact to the selection of LA River bridges. Many want to start study to determine an approach to the accumulative impact.
	Active	5	1/1/2006 PID	planning	Number of signature bridge types to study.	Need to consider a number of bridge types to span the LA river, but within acceptable budget and range of applicable structural systems for this site.	Different bridge types are applicable to this site considering span lengths, cost, function and aesthetics. During the preliminary engineering and environment phase there is a need to narrow down the possible bridge types for further detailed study to be included into the environmental document and presented to the public at large.	Scope Cost	Moderate	Moderate		50%	0	0	Acceptance	Perform a screening of a large number of bridge types. Rank the different bridge types and then the design team develop preliminary design/alignment/rendering and cost for those options to be carried into the environmental document.		DEA	monthly	During the 4th quarter of 2006, 15 bridge concepts were screened down to 5 with input from CAC, bridge experts and team members. Five concepts have been carried into Advanced Planning Studies to determine cost on 3 different alignments. During the 1st qt of 2009, two more concepts have been added, 1A a replica from abutment to abutment and 4A a 3-dual level extradosed. Type selection will be based on the APS reports.
	Active	6	6/1/2004 PID	design	Utilities - Fiber Optics Line on and adjacent to viaduct.	Need to determine utilities that require relocation. Risk is related to cost to owner and timing to relocate prior to demo.	Fiber optics line on existing bridge and adjacent to structure. Relocation cost may be high. Not sure of costs to City and Utility Company.	Schedule Cost	Very Low	Very Low		10%	0	0	Transference	Need to determine all utility location and agreements and inform utility company(s) so they can begin planning for the relocation.		CH	quarterly	3/2006 - PSR noted fiber optics line within sidewalk of bridge. 8/2006 fiber optics line located on poles adjacent to viaduct. 5/9/07 Appears costs to be burdened on the utility company(s).
	Active	7	6/1/2004 PID	construction	Contaminated soils at site	During foundation investigations it was noted that petro may be present in the ground.	Contaminated soils need to be identified and a plan put in place for mitigation. Type and amount could effect foundation type selection.	Schedule Cost	High	Moderate		70%	0	0	Acceptance	Need to determine degree of contaminated soils within the construction area, (foundations), and below bridge in general.		CH	quarterly	3/2005 -Need to review past geotech reports and determine plan of action for future investigations. 5/09/07 specs will have construction contractor remove contaminated soils, design team needs to identify and place in PS&E documents. Contaminated soils need to be considered in the cost of bridge type concept 1A.
	Dormant	8	6/1/2004 PID	planning	Accurate Mapping and Survey Data	Survey data and mapping used during the seismic vulnerability studies was not used to control. Need to have accurate survey information for use in the preliminary design and final design phases.	It is likely that the alignment corridor along Sixth Street will not change. Therefore an opportunity can be achieved by performing design surveys during the PR/ED period.	Quality Schedule	Very Low	Very Low		10%	0	0	Acceptance	Need to perform design survey during PR/ED phase. Will result in less redo of engineering products during the final design phase.		DEA	at project milestones	As of 1/3/07 aerial mapping completed and field surveys are underway. As of 5/9/07 aerial mapping and field surveys are completed. Following on surveying likely to supplement current mapping (pot holing high risk utilities).
	Active	9	6/1/2009 PID	planning	Cost Escalation from Bridge Type Selection	A baseline project was priced for clip box girders with allowance for architectural enhancements. If signature structures are selected over the main spans and approaches, the cost will increase.	During the preliminary engineering phase a number of different bridge type were studied to determine cost. At the end of the Screening Study 5 bridge types surfaced. The baseline structure did not receive any votes from the CAC, therefore a new base line was establish, call Bridge Concept No. 2 that did receive favorable votes from the CAC and engineering teams.	Cost Scope	High	Moderate		70%	0	0	Acceptance	Funding amounts and sources to be updated at the end of the Advanced Planning Studies.		LA and consultant team	at project milestones	Base line cost established in 2/06 and updated in 12/06 and again 10/07. In the 1st qt of 2009 the alignment 3B (modified) became the staff's recommended alignment. New base line cost is $345 million (CIP Box Girder with steel tie arches for pedway over the LA River, Bridge Concept No. 2. Bridge Concepts 1 - 5 costs as of 8/08 and range with Concept No. 4 having the lowest cost and Concept No. 5 the highest. The baseline Concept is about equal to Concept No. 4. In the 2nd qt of two supplemental APS concepts will be completed, concept 1A a replication from abutment to abutment and 4A a 3-dual level extradosed. Costs for these two new concepts will not be determined until May/09 but will be higher than Concepts 1 and 4.

Proposed by: Steve Thomas/DEA

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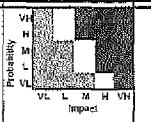
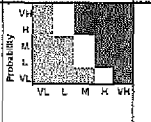
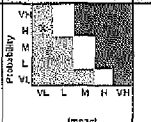
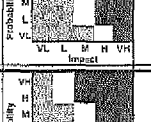
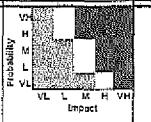
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
	Active	10	3/30/2006 PID	Planning	Cost Escalation from Stakeholder enhancements	A baseline project has been priced for a HSP project that limits funding for bridge replacement, right of way, and approx. 200 feet of roadway approach work at both ends of the bridge. Other scope items may be added that will not be funded by the HBRR program. Therefore, other sources of funding will be required.	During the environmental phase the scope should be defined.	Cost Scope	Very High	very high		90%	0	0	Mitigation	Need to have stakeholder understand the project need, scope and cost. Consensus building will be required.		LA and consultant team	at project milestones	3/13/2006 - Baseline project was presented to the Funding Task Group. As of the 1 Qt of 2008, "Greening" elements are being added to include guidelins from the LA River master plan, includes treatments at ends of viaduct to include vegetation and color schemes of median on viaduct, gateway pylons near river, belvedores at river plain, possible presentation of existing arch ribs as gateways, pathway below replacement option at existing cross roads). Roadway/greening cost have increased as noted in the EOC total roadway cost items.
	Active	11A	6/1/2004 PID	design	Existing Corp of Engineers Tunnel below west viaduct and railroad.	There is an existing tunnel below the west viaduct that serves as access to the river. Currently the game plan is to avoid this facility, but the new alignment, foundation or construction could have impacts on the tunnel.	If the reconstruction conflict with the existing tunnel or it operations during construction. This will be determined during the bridge advanced planning studies.	Cost Scope	Very High	Moderate		90%	0	0	Acceptance	Need to determine tunnels use and constraints with owner. Need to avoid if possible for location of proposed foundations within the approach to the tunnel. Must avoid any tunnel conflict by modifying alignment and foundation location, as cost related to relocating tunnel under railroad right of way will be very costly and impact schedule.		MN/DEA	prior to setting final alignment	As of 1/3/07 field survey scope completed to determine location of tunnel. As of 1st Qt 08 tunnel impacts will require some reconstruction for foundation constructies. Impacted length is approximately 40, but is not located within the Rail Road R/W. Cost at APS stage indicate cost impacts less than 2% of project costs. Need to reconstruct architectural features effect during from realignment.
	Active	11B	2/1/2008 PID	design	Existing Corp of Engineers Ramp below west viaduct and railroad.	There is an existing ramp leading to the tunnel below the west viaduct that serves as access to the river. Currently the game plan maintains realignment of the ramp for the different bridge concepts.	If the reconstruction conflict with the existing tunnel or it operations during construction. This will be determined during the bridge advanced planning studies.	Cost Scope	High	very low		0%	0	0	Mitigation	Need to determine tunnels use and constraints with owner and design for relocation of ramp		MN/DEA	prior to setting final alignment	As of 2/1/08 some realignment of the ramps to the tunnel will require realignment and reconstruction to allow for new foundations. As of the 2 quarter of 08, it has been determined that the tunnel can be shut down during periods of construction. Need to reconstruct architectural features affect during from realignment.
	Active	12	6/1/2004 PID	Construction	Existing Power Transmission Lines at east and west river banks	Currently power lines transverse the alignment at the river banks. Risk will be during construction, what are the power company restrictions that could affect the method of construction.	The decision to replace the bridge.	Cost Schedule	High	low		70%	0	0	Avoidance	Need to work with the utility company to define construction restrictions and deal with this in the design and specs.		CH	During prelim. Design	DMP restrictions will need to be placed into specs.
	Dormant	13	6/1/2004 PID	design	Relocation of Existing Power Transmission Lines located at east and west river banks.	Some potential bridge types, cable supported systems, would likely require relocation of the power lines. Feasibility of these type of structural systems will depend upon the likelihood to relocate the transmission lines. Also, alignment shifts toward the south, will impact the towers.	The decision to study cable supported structures and move the alignment toward the south. Cable Stay bridge concepts were eliminated during the screening study and are no longer being considered. Also, alignments were screened and those within 25 feet of the towers were eliminated.	Schedule Cost	Very Low	Very Low		10%	0	0	Avoidance	As of the 4 Qt of 2007, it was determined from DMP that relocating the power lines or towers was a fatal flaw as the system is non-redundant.		CH/DEA/MN	During prelim. Design	During the 4th Qt of 2007 it was determined to be a fatal flaw to relocated the tower line due to cost and redundancy of the system. Therefore all alignments and bridge types requiring relocation were dismissed from further consideration.
	Active	14	6/1/2004 PID	design	Railroad Restrictions	Bridge type, span layout will depend upon RR allowing bents within their R/W, construction access such as contractors equipment and use of false work. The most economical structure type will be dip on false work depending upon the RR restrictions.	Decision to replace bridge or retrofit bridge.	Schedule Cost	High	High		70%	0	0	Acceptance	Need to know railroad restrictions and select bridge type and construction method accordingly.		MN/DEA	During prelim. Design	As of 2/11/08 meetings with Rail Road companies indicate: dome can take place during 48 hour windows with protection provided for the tracks, false work bents can be located within R/W for CIP construction. Rail Road would like to eliminate existing horizon clearance issues that do not meet current standards. Replacement schemes being considered will span rail road R/W. Retrofit alternates do not meet existing clearance requirements. Bridge concepts 1, 2 and 3 have greater rail road impacts compared to concepts 4 and 5. Bridge concepts 1A and 4A were added in the 1st qt of 2008. Concept 1A will have the least impacts to the railroad r/w.

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15) =(13)x(14)	(16)	(17)	(18)	(19)	(20)	(21)
	Active	15	6/1/2004 PID	r/w	Right of Way needs	Need to determine right of way takes (partial, full, aerial) for different alignments and bridge types and determine estimate of associated R/W costs.	Decision to replace bridge.	Cost Schedule	Very High	Very High		80%	0	0	avoidance	Need to determine right of way needs and associated cost.		LA/MN	During prelim. Design	As of 1/07 a matrix of potential property impacts has been established for the different alignments. City Risk Management Group indicates that aerial right of way is acceptable. However, the design team does not recommend alignment C due to risks involved during and after construction. In the 4th qt of 06 the PDT recommended alignment 3B modified as the preferred alignment to minimize this risk.
	Active	15A	1/1/2006 PID	r/w	It may be possible to span some existing properties by obtaining aerial rights of way. Opportunity would result in lower R/W cost, but threat is issue of having a City facility located over non-City property.	Risk relates to future maintenance access to viaduct, usage of property below the viaduct by others, and objects from the viaduct deck causing damage or injury to property of others below the viaduct.	Decision to obtain aerial R/W is moving ahead as of the 4 Qt of 06.	Schedule Cost	Moderate	Moderate		50%	0	0	Avoidance	City risk management group needs to determine if opportunity (decrease R/W cost) is worth the risk associated with the decision to obtain aerial rights.		LA and consultant team	During prelim. Design	As of 1/1/06 initial meetings have been held with City Risk Group and LABOE. Risk Group needs a better understand the degree of R/W needs to address the opportunity/threat risks. Design team recommends alignment A, or B as risk go down and total project cost is lowest for alignment A.
	Active	15B	2/13/2006 PID	r/w	It may be possible to span some existing properties by obtaining aerial rights of way. Opportunity would result in lower R/W cost, but threat is higher construction cost due to risk of construction taking place over existing facilities.	Risk relates to obtaining accurate construction cost estimates. Contractor will increase bid amounts to cover their risks associated with building in congested areas and over existing facilities.	Decision to obtain aerial R/W is moving ahead as of the 4 Qt of 06.	Schedule Cost	Very High	Moderate		0%	0	0	Avoidance	Should consider performing a contractors cost estimate instead of using bid items and historical data for unit cost for the bid items.		LA and consultant team	Milestone Cost Estimates	As of 2/2006 the team is considering performing a contractors type of cost estimate. During the APS period contractor's input suggests that alignments A or B are preferred over alignment C. Alignment B is most preferred by contractors to minimize risk and provide for access during construction. In the 4th qt of 06 the PDT recommended alignment 3B modified as the preferred alignment to minimize this risk.
	Active	17	2/13/2006 PID	environmental	Opportunity to reuse portions of the existing bridge.	As part of the alternative to replace the existing bridge should consider reuse of the existing steel arch for art work within the project area.	Using the existing arch rib as an architectural feature and a "green" solution to reuse materials.	Scope Cost	Low	Moderate		30%	0	0	Acceptance	Could be a unique way to dispose of the existing bridge and preservation of the arch rib.		LA and consultant team	During prelim. Design	Need to discuss potential idea with SHPO & LA Conservancy. LA Conservancy, Mike B, indicated that this scheme would not be preservation. Some members of the CAC like the idea as a gateway. However, SHPO is neutral on there issue.
	Dormant	18	6/1/2004 PID	design	Foundation type	The current bridge typically uses spread footing, with the exception of pile support bents at the river and under US 101. The substructure cost will likely make up 30 to 50% of the bridge cost and these cost are not well defined.	Decision to replace bridge.	Cost Schedule	Moderate	Moderate		50%	0	0	Acceptance	Need to perform geotech and structural preliminary design to explore the cost of the substructure including foundation. Issues include vibration at nearby building, potential contaminated soils and seismic demands.		CH/DEA	During prelim. Design	Preliminary foundation recommendations as of 3/06 are to use steel pipe driven into place.
	Dormant	19	1/1/2006 PID	environmental	Birds nesting on existing structure.	Need to perform environmental studies to determine if certain birds are nesting on the structure. Risk is regarding cost association due to schedule delays associated with the demo of the existing structure.	Decision to replace bridge.	Cost Schedule	Moderate	Low		50%	0	0	Acceptance	Need to determine type of nesting birds and perform pre-demo survey.		PTG	During prelim. Design	A mitigation measure may be needed.
	Retired	20A	3/16/2005 PID	environmental	Maintaining traffic on existing viaduct while demo takes place and construction a new viaduct.	In order to replace the bridge, a complete detour away from the site is desired from the standpoint of right of way and construction cost. If this condition is not accepted, project cost will increase to obtain additional right of way and construction cost will increase for staged construction and traffic control. Feasible to stage construct a new viaduct is questionable from a structural engineering viewpoint.	Decision to demo and replace the existing viaduct.	Scope Cost	Very Low	very low		10%	0	0	Avoidance	Need to complete a TMP that includes a station for the duration of the demo and reconstruction. Should consider and reject staged construction in the environmental process (increase time to construct, temporary structural supports within river and railroad right of way, structural stability)		MN	During prelim. Design and Environmental phase.	As of the 4th Qt of 2006 it appears acceptable to detour traffic away from the demo and construction site for the replacement alternative.
			3/16/2005					Scope												As of the 4th Qt of 2006 it appears acceptable to detour traffic away from

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		(16)	(17)	(18)	(19)	(20)	(21)
	Retired	20B	PID	environmental	eliminating costs of closing viaduct while performing construction of the retrofit alternative.	In order to retrofit the structure, lane closures will be necessary and a detour is likely not required.	Decision to retrofit the existing viaduct.	Cost	very high	Moderate		0%	0	0	Acceptance	Need to complete a TMP that includes a detour for the duration of the retrofit.		MN	During preliminary Design and Environmental phase.	The plans and construction cost. However, it might be more cost effective to allow for construction with lane closures. Most of the seismic retrofit work would take place below the roadway deck.
	Active	21	PID	construction	Unit price escalation for materials, fuel and labor could exceed available funds to complete the project.	From about 2004 the cost for highway construction materials (steel, rebar, cement, asphalt) have increased dramatically over historical indexes. The baseline cost have been determined using 2005, first quarter cost and escalated to midpoint of construction. It is not possible to predict the market prices for a project targeted for midpoint of construction taking place in quarter 1, 2013. Risk is availability of funds to cover cost increases.	Construction cost at time of advertising the project.	Cost Schedule	Moderate	Moderate		50%	0	0	Acceptance	Need to follow construction cost escalation, update estimates, document and obtain funding.		City/Funding Agencies	During preliminary and final design phases.	As of 6/08 a cost escalation factor of 42% is being used in the cost estimates. As of the 4th qt of 08, unit prices are not escalating as has been the case in previous years.
	Active	22	PID	design	Removal of existing piles could increase construction activities and excavations within channel and adjacent to rail road facilities.	The existing foundations within the river and at the top of the river banks (adjacent to rail road facilities) are pile supported. As-built plans indicate piles are 19 feet in length being constructed of partial length reinforced concrete. Piles can not be reused and mostly likely must be removed for construction of new deep foundation.	Proposed alignments within the footprint of the existing foundations.	Cost Schedule	Very High	High		90%	0	0	Acceptance	Account for pile removal in environmental documents and cost estimates and the possibility of using driven H-piles between existing piles at the river pier.		DEA/CH/PTG	Cost estimate updates and environmental documents.	As of 1/3/07 preliminary alignments will overlap the existing piles, thus requiring removal of existing piles or driving piles between existing piles. For bridge concepts 1, 2 and 3 impacts will occur at the top of river bank. For bridge concepts 1, 4 and 5 conflict will occur at the middle river pier.
	Active	23	PID	design	Cost and schedule to relocate underground utilities.	Underground utility study is required to determine (such as sewer siphon) impacts within the project area. Until the type and impacts are determine relocation cost responsibility can not be estimated.	Decision to retrofit or replace viaduct.	Cost Schedule	High	Low		70%	0	0	Acceptance	Identify utilities and relocation cost in project.		MN/CH	Design development	As of 2/2008 it appears that the sewer siphon will not be impacted below the river. Also, the Wastewater Engineering Services Division is indicating that the siphon may be abandoned. Impacts for added concepts 1A and 4A has not been determined as of 1st qt of 08.
	Active	24	PID	design	City cash flow to pay for design and environmental cost. Delays in payments likely to slow down the project and risk obtaining funding sources that are tied to cash flows.	Payments to perform preliminary design and environmental studies is being delayed due to internal issues within the City.	Decision to move ahead with project.	Cost Schedule	High	High		0%	0	0	Acceptance	Elevate the cash flow issue to upper management within the City.		City/CH	Design development	As of 2/2008 Caltrans has been responsive to provide additional reimbursements but process within the City is delaying timely payments. As of the 2nd quarter 08, design firm's have invoices have been delayed over 90 days.
	Active	25	PID	design	Failure to reach agreement with State and Advisory Council will delay the ROD milestone and possible funding sources could be lost.	Need to obtain concurrence of preferred environmental alternative.	Decision to replace viaduct.	Cost Schedule	Moderate	High		0%	0	0	Acceptance	Need to work with these groups to provide an understanding of the project purpose and need.		PTG	Environmental Process	106 process requires concurrence. In the 4th qt of 08 the PDT recommendation is to replace the viaduct.
	Active	26	PID	design	Changes to the out-to-out width of the bridge after the preferred bridge type is selected will result in redesign. Redesign will effect schedule and design cost.	Currently the preliminary design is being made using a 10 wide median and 10 wide sidewalks. If these are changed after Oct of 2008, it will require reworking the design.	Decision to change geometric configuration of viaduct (out-to-out width or alignment)	Cost Schedule	Moderate	Very High		0%	0	0	Acceptance	Move to have EV studies as soon as Advanced Planning Studies are completed.		MN/CH	Design development	The VE studies are being schedule shortly after completion of the Advanced Planning Studies. VE studies should be concluded in July of 08. Stakeholds may want a reduced roadway width.
	Retired	27	6/19/2008	Environmental	Selection of a "Apparent Best Project"	In order to keep the project moving ahead need to start design at risk in October. Opportunity will be to accelerate the schedule.	Selection of an Apparent Best Project and the City approval to move ahead with design to support the environmental document.	Cost Schedule	moderate	High		0%			Acceptance	Have a team work shop following the VE study to determine an Apparent Best Project.		City/CH/PTG/MN/DEA	At conclusion of VE studies.	Cost and environmental tech studies are complete as of 8/08. After VE studies team to meet to address which alternative is likely to be the apparent best project. During the 1st qt it was decided to remove the PDT recommended bridge type, but to recommend the replacement alternative along an alignment 3B (modified).
			6/19/2008																	

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	Active	28	[illegible]	Engineering Services	Caps on design contracts set at $5 million.	The magnitude of the design work will likely exceed the design fees available within the contracts. This could cause delays to schedule if a solution is not found to increase total contract amounts.	Scoping of project for next design phase.	Schedule Scope	Very High	Moderate		0%			Acceptance	City program manager to discuss with upper management.		City/DEA/PTG/MN	Prior to execution of Task Order No. 2	Additional funds for design and construction engineering have been requested through Caltrans as of 6/09. However, no action regarding consultant caps within contract agreements.
	Dormant	29	6/16/2008	Construction	Pile driving vibration damage to existing facilities.	During construction, third parties may claim their property was damaged due to pile driving, resulting in claims to the Contractor and City.	Decision to use driven piles,	Cost Schedule	High	High		0%			Acceptance	Within the construction specifications, require the contractor to perform measurements of properties and to install vibration monitors to document level of vibration.		CH	During final design	Normally would place requirements within the contract specifications. Geotech to investigate drilled shafts for applicable pile type, risks and costs.
	Active	30	6/16/2009	Design	Relocation of City facility. City maintenance facility below viaduct located at west end of the project.	The facility needs to be relocated prior to demo to avoid demo and construction delays. At this time design is proceeding.	Decision to retrofit or replace viaduct.	Cost Schedule	very high	high		0%			Acceptance	Need to bring the planning process and design process in task order no. 2.		CH/City	quarterly	Need to determine if design and relocation can take place prior to the ROD. During the 1st qt of 09 the decision was made to assign this project (relocation and design) to the cities CAO.
	Active	31	4/7/2009	Funding	1B funding being lost due to starting demo at a late date.	Demo may be delayed until after Council elections. Demo is the last construction activity and funding of 1B is based on a first come first serve basis until the funds are depleted.	Decision to delay demo for election dates.	Cost Schedule	Very High	low		0%			Acceptance	If the elections are determined by June of 2011 it might be ok to award construction in Apr of 2011 assuming 3 months of mobilization by the contractor.		City	quarterly	Need to have CO 14 understand potential lost of 1B findings,
	Dormant	32	4/7/2009	Construction	Differing Site Conditions	Pile foundation type not being compatible with existing conditions.	Decision to use deep foundations	Cost Schedule	High	Very High		0%			Acceptance	Recommend a drilling program that drills boring at each bent location.		City/CH	quarterly	Approximately 18 borings were taken along alignment C, for bridge concept 4, preliminary foundation report. Will need to re-address after bridge type is determined and layout of bents sol.
	Active	33	4/7/2009	Design/Construction	Delay of Notice to Proceed on Design could result in high project costs.	It is estimated that 18 months will be required to perform the final design and be ready to list the project for advertising. With bid award target date of 4/2011, final design should be underway by 6/2009. As of April of 2009 no has not been given for final design.	Decision to retrofit or replace bridge.	Cost Schedule	Very High	Moderate		0%			Mitigation	Move to change project delivery method to design sequencing or design-build. Unchecked details could be used as the bidding documents.		City/CH	monthly	This method has not been used by the City for past projects. CH and the City are determining the process to move forward.
	Dormant	35	4/7/2009	Design	Process to select bridge type	If the decision to select bridge type is not made in the 3 or 4 qt of 2009, the lack of decision will likely delay the design and put funding at jeopardy, if construction can not start (1B funding).	Decision making process and final decision to select the bridge type.	Cost Schedule	High	Very High		0%			Avoidance	Need to meet with decision makers so they understand the need to select the bridge type so final PS&E can be developed so a construction contract can be award.		City/PDT	monthly	Meeting have been held with CO14 in the 1 qt of 2009 to explain the issue of "First come first serve" in secure 1B funding. Meetings have also been held with the City Engineer on the funding plan and its constraints.
	Dormant	36	4/7/2009	Construction	Buried man-made objects	Buried man-made objects (rock pile, concrete chunks, etc.) might be in the vicinity of pile work.	Decision to use deep foundations.	Cost Schedule	Moderate	Moderate		0%			Acceptance	Recommend a drilling program that drills boring at each bent location. Consider geophysical surveys		City/CH	quarterly	Approximately 18 borings were taken along alignment C, for bridge concept 4, preliminary foundation report. Will need to re-address after bridge type is determined and layout of bents sol. Also could review past city projects within this area for potential old foundations.
	Dormant	37	4/7/2009	Construction	"Green House Gas" Legislation Cost	The California Legislatur could enact new carbon emission standards for construction equipment in California.	Contractors would need to pass on the extra cost of upgrading their equipment to meet the new standards.	Cost Schedule	Very High	Low		0%			Acceptance	Will need to determine cost impacts and increase unit prices within cost estimate.		PDT	quarterly	Will need to consider when law is passed. Also, if not law at the time of the construction award, may want to place language into the contract to avoid potential change order.

PROJECT RISK MANAGEMENT PLAN - Sixth Street Viaduct

	Identification						Qualitative Analysis				OPTIONAL Quantitative Analysis			Response Strategy			Monitoring and Control		
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Threat/Opportunity Event	SMART Column	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact ($ or days)	Effect ($ or days)	Strategy	Response Actions including advantages and disadvantages	Affected WBS Tasks	Responsibility (Task Manager)	Status Interval or Milestone Check	Date, Status and Review Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15) =(13)x(14)	(16)	(17)	(18)	(19)	(20)	(21)
	Dormant	38	4/7/2009	Design	Design competition for final design.	Decision to hold a design competition has been asked about by city and other stakeholder. The competition would ask design firms to submit preliminary design for a competition to win the final design. A design competition would likely delay the job by 1 year and risk losing 1B funds.	City decides to move ahead with a design competition.	Cost Schedule	low	Very High	Probability VH H M L VL / VL L M H VH / Impact	0%			Avoidance	Inform City Engineer and other stakeholds of risks and associated cost to have a design competition.		City/CH	monthly	Have discussed with City Engineer on April 7, 2009. Issues include, setting up criteria for the competition, advertising the competition, short listing qualified teams, providing stipends to teams, selecting team, potential modification to environmental document and the time delay that will risk funding.
	Active	39	2/26/2010	Design	The SHPO reviewing the bridge plans	As part of the MOU with the SHPO, plans will be submitted to the SHPO for review and comment. A 30 review period is being required. Changes to the plans and untimely review could delay the project schedule causing additional design cost and potentially funding deadlines.	City decided to accepted the SHPO review as part of the MOU.	Cost Schedule	low	High	Probability VH H M L VL / VL L M H VH / Impact	0%			Acceptance	Provide the SHPO with plans and request review comments within 30 days for consideration. Place the review time line into the project schedule.		City/Design Team	monthly	

APPENDIX C – CHECKLIST FOR FINANCIAL PLAN COMPONENTS
FHWA FINANCIAL PLAN GUIDANCE ATTACHMENT C
6th STREET VIADUCT PROJECT INITIAL FINANCIAL PLAN

Financial Plan Component	Status
1. Cost Estimate	
Provide a total cost estimate for the full project. Provide an activity breakdown for feasibility studies, preliminary engineering, environmental assessment, right-of-way acquisition, construction, construction engineering and inspection, project management, contingencies, and ITS activities. Include other cost categories, as necessary. See *Major Project Program Cost Estimating Guidance*.	completed
All cost estimates should be expressed on a year-of-expenditure basis and should include a narrative describing assumptions used to arrive at such estimates.	completed
2. Implementation Plan	
Provide a comprehensive description of the project, including, but not limited to, project scope, termini, and interconnections. Describe any proposed phasing for the project and dependencies on other projects. Include a list of all federal, state, and local permits and approvals required for the project and a schedule for obtaining such permits and approvals.	completed
Include the schedule for completing the project, by year, showing estimated costs.	completed
It should be noted that updates to the initial financial plan should ensure consistency in project scope. If costs and/or schedule change, then the changes must be clearly identified to ensure valid comparisons to the initial financial plan.	completed
3. Financing and Revenues	
Sources should include separate line items, as applicable, for Federal, state, and local funds; private investment; any other contributions; market value of right-of-way dedications; bond proceeds (general obligation, revenue, GARVEEs, and others); state infrastructure bank loans; other borrowing (specify); investment income; Federal credit assistance (TIFIA). The total of all funding sources should equal the total of the cost estimate. New funding sources developed after the Initial Financial Plan should be incorporated at the subsequent Annual Update.	completed
4. Cash Flow	
The cash flow pro forma should indicate the level of cash required to fund the project on an annual basis over the period of the financial plan. The pro forma should include beginning and ending balances, all sources and uses of funds, and show annual change in financial position. Total sources and uses should be equal.	completed
5. Risk Identification and Mitigation Factors	
This section should discuss the risk analysis done for the project. It should identify the risks to project completion and revenue sufficiency. Identification of those risks and the potential mitigation actions should be described.	completed

DRAFT ATTACHMENT NO. FIVE

EXECUTIVE SUMMARY

6th Street Viaduct Seismic Improvement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – Bridge Nos. 53C-1880 and 53-0595
EA 251200
Federal Project Number 5006 (342)
SCH # 2007081005

Final Environmental Impact Report/ Environmental Impact Statement and Section 4(f) Evaluation

Prepared by

City of Los Angeles
and
State of California Department of Transportation

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.

July 2011

ATTACHMENT NO. FIVE

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ATTACHMENT NO. FIVE

1. Introduction and Background

The California Department of Transportation (Caltrans) and the City of Los Angeles (City) propose to undertake seismic improvement of the 6th Street Viaduct over the Los Angeles River (Bridge No. 53C-1880) and the 6th Street Overcrossing, which includes the US 101 Hollywood Freeway (Bridge No. 53-0595). The structure is located in a highly urbanized area just east of Downtown Los Angeles in the County of Los Angeles, California, as shown in Figure 1.

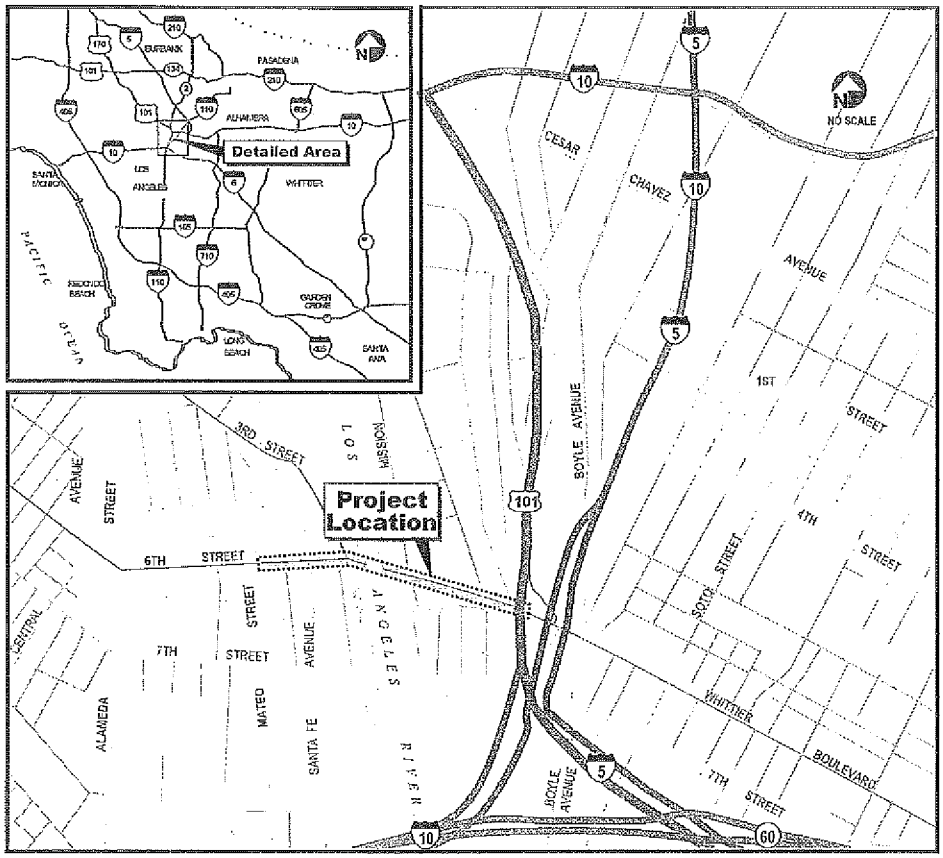


Figure 1 Project Location and Vicinity Maps

The 6th Street Viaduct crosses the Los Angeles River along an east-west alignment, connecting Downtown Los Angeles with the Boyle Heights Community to the east. Land uses along the north and south sides of the viaduct are predominantly industrial and commercial. A City Department of Public Works maintenance office is located within the area underneath the viaduct on the west side of the river. An access tunnel, which is located under the viaduct on the west side of the river, provides access to the river from Santa Fe Avenue near the frontage road on the south side of the viaduct.

The Los Angeles River, which is contained within a trapezoidal concrete-lined channel, and multiple-track railroad corridors located along the river's east and west banks pass under the viaduct in a north-south direction. The Los Angeles River is a flood control channel that receives stormwater runoff from its 834-square-mile watershed, treated effluent from two wastewater treatment plants, and some rising groundwater in the Glendale Narrows area. The river discharges to an estuary in Queensway Bay in the Long Beach Harbor.

Several high-voltage transmission lines, owned and operated by the Los Angeles Department of Water and Power (LADWP), are also located along each bank of the river. Large steel LADWP transmission towers are adjacent to the viaduct on the south side. Figure 2 shows an aerial view of the project limits and surrounding land uses.

The proposed 6th Street Viaduct Seismic Improvement Project is included in the Final 2008 Regional Transportation Improvement Program (RTIP) and the Federal Transportation Improvement program (FTIP), in which the project is programed for $245 billion over a 6-year period, from fiscal years 2008/09 to 2013/14. The RTIP is currently being amended to include the total project cost of $401.2 million, and the actual cash flow for the project would extend through fiscal year 2017/2018. The Final Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) addresses the potential environmental impacts of various alternatives considered for the proposed project, including a No Action Alternative, retrofit alternative, and replacement alternative. The current estimate for right-of-way (ROW) and construction costs for the retrofit alternative is $199 million. The estimate for the replacement alternatives vary from $306 million to $371 million depending on the alignment and bridge concept.

The EIR/EIS for this project was prepared in accordance with the 2002 City of Los Angeles Environmental Quality Act Guidelines, adopted pursuant to the requirements of Section 15022(a) of the California Environmental Quality Act (CEQA) Guidelines; the Council on Environmental Quality (CEQ) Regulations implementing the National Environmental Policy Act (NEPA) (40 *Code of Federal Regulations* [CFR] 1500-1508); and the Federal Highway Administration (FHWA) Environmental Regulations (23 CFR 771) to inform the public and decision makers of the environmental effects of the 6th Street Viaduct Seismic Improvement Project. This document has been prepared jointly by Caltrans, the federal lead agency for NEPA, functioning as a designee of FHWA pursuant to 23 United States Code (U.S.C.) 327, and by the City of Los Angeles, who is the lead agency for CEQA.

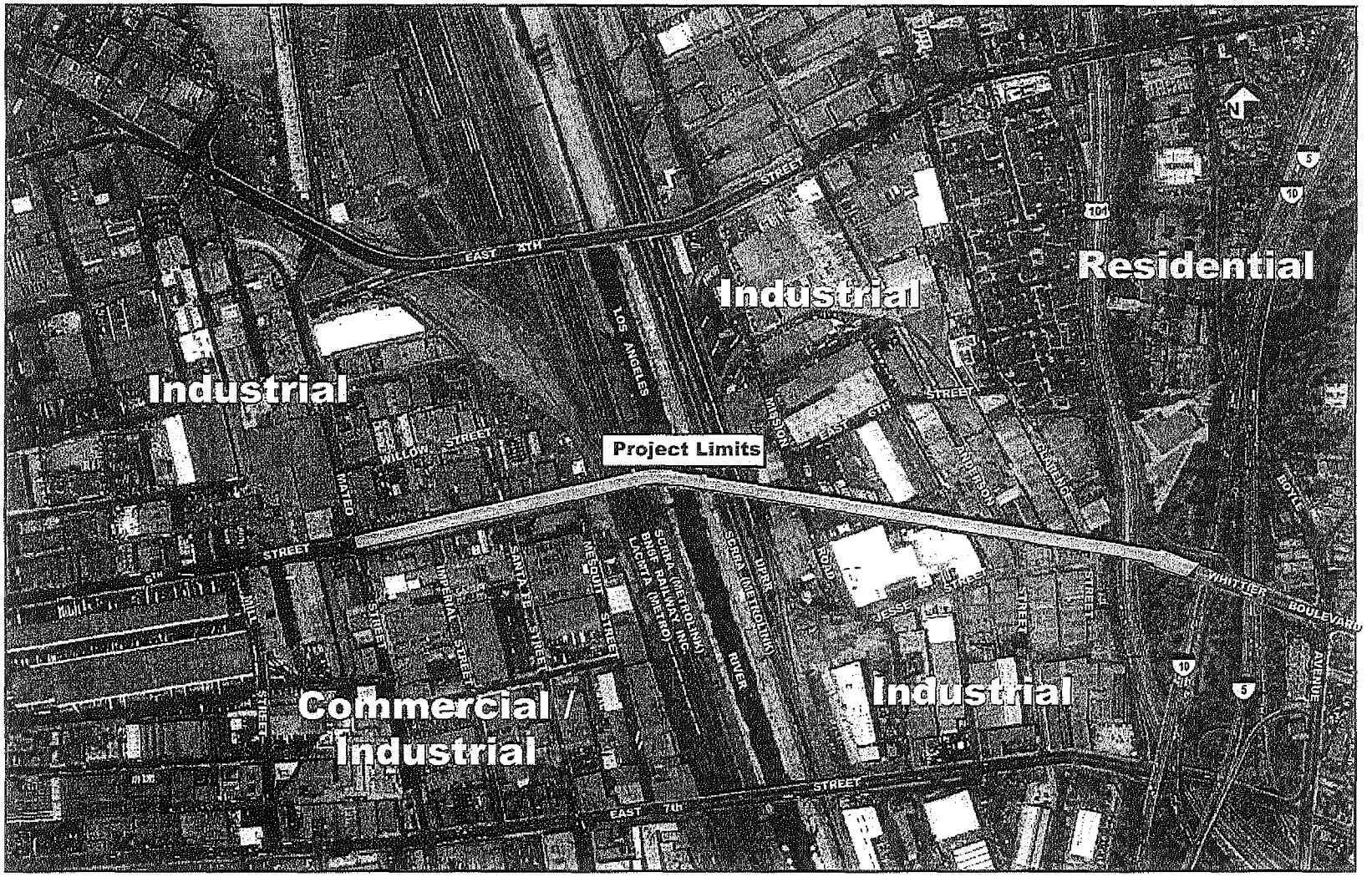
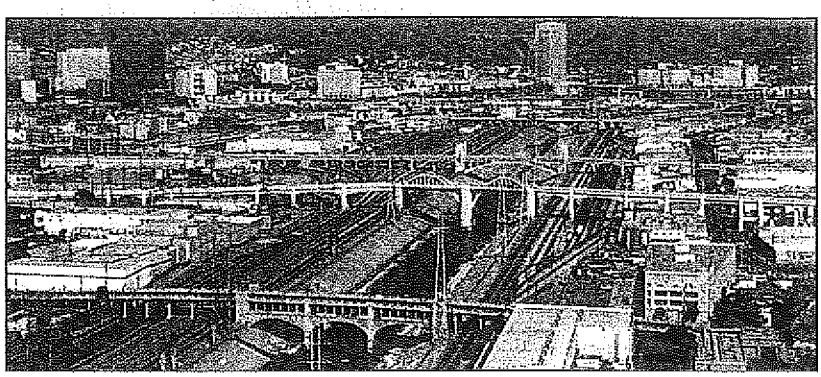


Figure 2 Aerial View of the Proposed Project Limits and Surrounding Land Uses

2. Purpose and Need



The 6th Street Viaduct is comprised of 43 concrete spans and 2 large steel through arch truss spans over the Los Angeles River. Most of the structure sits on 58-foot (ft)-high columns supported by spread footings, and it is supported by multiple column bents and spread footings. The viaduct can be divided into three segments: (1) approach spans west of the Los Angeles River, (2) steel through arch spans over the river (main spans), and (3) approach spans east of the river.

The purpose of the project is threefold:

- Preserve 6th Street as a viable east-west link between Boyle Heights and Downtown Los Angeles
- Reduce vulnerability of the 6th Street Viaduct in major earthquake events
- Resolve design deficiencies of the 6th Street Viaduct

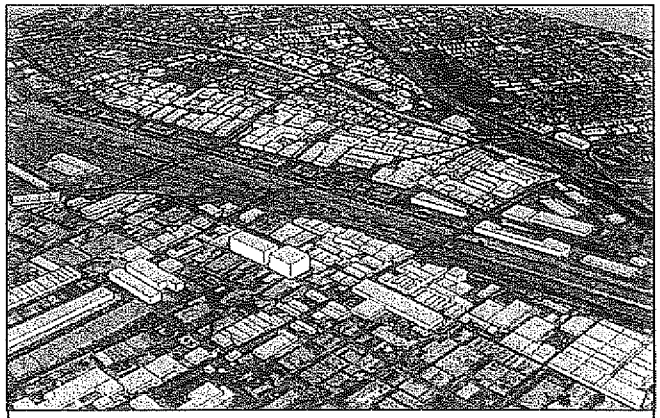
The following discussion summarizes the present conditions and deficiencies of the 6th Street Viaduct that constitute the need for the proposed action.

2.1 Preserve Viability of 6th Street Transportation Corridor

The 6th Street Viaduct is an important link between the Boyle Heights Community and Downtown Los Angeles, including the Arts District. The viaduct carries more than 13,000 vehicle trips per day compared to 12,690 vehicle trips per day along the 1st Street Viaduct and 17,680 vehicle trips per day along the 4th Street Viaduct, which are two other important links between East Los Angeles and the downtown area.

In addition to being an important link between East Los Angeles and Downtown Los Angeles, many Boyle Heights residents view the viaduct as a community landmark and an iconic symbol of the City of Los Angeles as a whole. Residents in the Arts District also view the viaduct as an important landmark for the City.

The Los Angeles River Revitalization Master Plan (LARRMP) designated the area including the 6th Street Viaduct as the "Downtown Industrial Opportunity Area," one of five demonstration areas of the LARRMP. There are currently two alternatives for development of the opportunity area: the DI-A and DI-B concepts. Both concepts designate 6th Street in the proposed project area as a Primary Arterial Green Street. The alternatives also propose an expanded multi-use and bicycle trail on the western bank of the Los Angeles River and a promenade along the eastern bank of the river, each having its own underpass beneath the 6th Street Viaduct. In addition, both alternatives provide pedestrian bridge access ramps from the west side of 6th Street north to the proposed expanded trail. Alternative DI-A designates the area east of the river north of 6th Street as a *Neighborhood Gateway*, while Alternative DI-B establishes this area as a *Regional Gateway*.

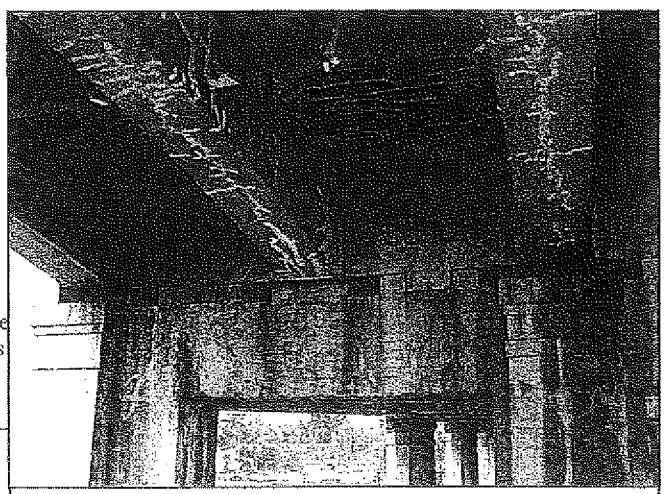


One of the Proposed Downtown Industrial Development Schemes, LARRMP 2007

2.2 Reduce Vulnerability to Seismic Collapse

The 6th Street Viaduct is classified as a Category I structure by Caltrans[1], and mandatory seismic retrofit is required. The viaduct was constructed in 1932 using state-of-the-art concrete technology at that time and the use of an onsite concrete batch plant. Over the last 75 years, concrete elements of the viaduct have cracked and deteriorated as a result of an internal chemical reaction called Alkali Silica Reaction (ASR), which is caused by the reactive aggregate used to prepare the concrete. Because of this ongoing and irreversible chemical action, the 6th Street Viaduct's concrete has lost significant strength, and the structure is subject to failure under predictable seismic energy releases.

Alkali Silica Reaction occurs between the alkaline pore solution of the cement paste and silica in the aggregate particles. The ASR deterioration of the mortar and concrete is due to the swelling of gel formed by the reaction of alkali in the cement with reactive silica in aggregates in the presence of moisture. The expansion of

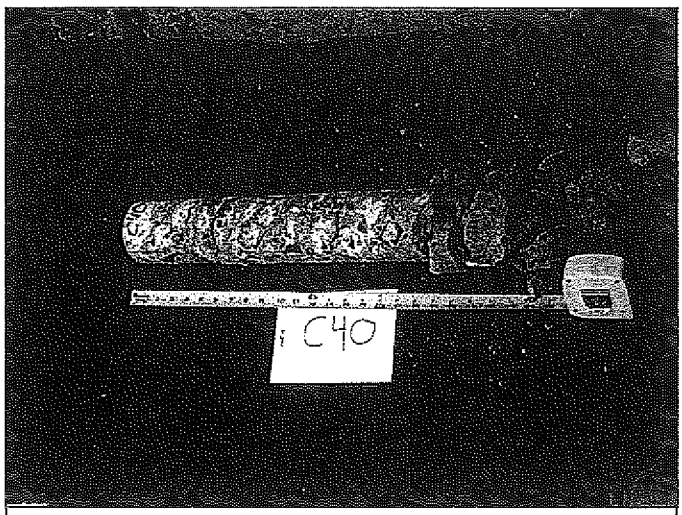


Cracks due to ASR

[1] A Category 1 structure is a highway structure that has be
level earthquake. This classification of structure requires

the gel results in expansion and cracking. The most common manifestation of ASR is surface cracking. In the advanced stages, a clear to milky gel (i.e., silica gel) will sometimes extrude from cracks in the concrete.

In the late 1980s, the deck of the 6th Street Viaduct was stripped of asphalt, and a waterproof coating was applied to the underlying concrete in an attempt to minimize moisture infiltration. In addition, the City repeatedly patched the viaduct using epoxy injection – a process that has left stains and discoloration and necessitated the application of cementitous coatings to hide the unsightly honeycomb effect of these repairs and to further seal the surface from moisture. Cracking is evident throughout the viaduct, with large cracks and spalling evident on its outer columns. As shown in the picture below, core samples show more severe cracking within the concrete matrix than on the outer surface.



Concrete core sample showing damage caused by ASR

While the deteriorated surface appearance of the viaduct is an issue, its underlying structural integrity is of much greater concern. In 1989, the Whittier Narrows earthquake caused damage to shear keys and resulted in a column crack at Bent 33. The structure has since been classified by Caltrans as a Category I structure and placed on the mandatory seismic retrofit list.

In the mid 1990s, Caltrans conducted an evaluation of Bridge No. 53-0595, which is the segment owned by Caltrans that crosses US 101. This evaluation determined that seismic retrofit was warranted and, in 1995, Caltrans undertook a retrofit construction project for that portion of the 6th Street Viaduct. The Caltrans seismic retrofit project placed infill walls between existing columns at the bents adjacent to the mainline roadbed. While this improvement was consistent with the Category I seismic retrofit program by eliminating potential collapse (failure) vulnerabilities, it did not resolve the long-term ASR problem and only improved the State-owned 235-ft-long segment of the 3,500-ft-long viaduct. The City elected to not move forward with a retrofit design similar to the one employed by Caltrans because of concerns that such a strategy would not address the ongoing degradation of the viaduct concrete due to ASR. The ASR deterioration continues to weaken the concrete strength, which results in greater seismic vulnerability over time.

In late 2000, the City engaged a consultant to determine the strength of the existing concrete and the overall condition of the structure through a materials testing program. This extensive investigation, completed in January 2002, confirmed the presence of severe cracking and low concrete strength throughout the viaduct and identified its root cause to be ASR[2]. Figure 3 graphically demonstrates the findings of the materials testing program in various elements of the 6th Street Viaduct due to ASR. As can be seen, the columns and foundations show the most damage (in red).

The *Final Seismic Retrofit Strategy Report*, completed in 2004[3] following the extensive material testing program mentioned earlier, concluded that the viaduct, in its current state of material deterioration and lack of structural strength, is subject to failure under loadings associated with a major earthquake. The probability that the viaduct will fail under major seismic events exceeds 70 percent in 50 years. This vulnerability level is extremely high compared to the normally accepted collapse probability of 10 percent or less over 50 years, as defined by the American Association of State Highway and Transportation Officials (AASHTO) and Caltrans. The high risk of collapse and continuing concrete deterioration indicates the need for timely corrective action to either seismically retrofit the viaduct or replace it.

[2] Sixth Street Viaduct Over Los Angeles River (Bridge No. 53C-1880): Field Sampling and Testing Program Final Report, February 2002.

[3] Sixth Street Viaduct Final Seismic Retrofit Strategy Report, 2004.

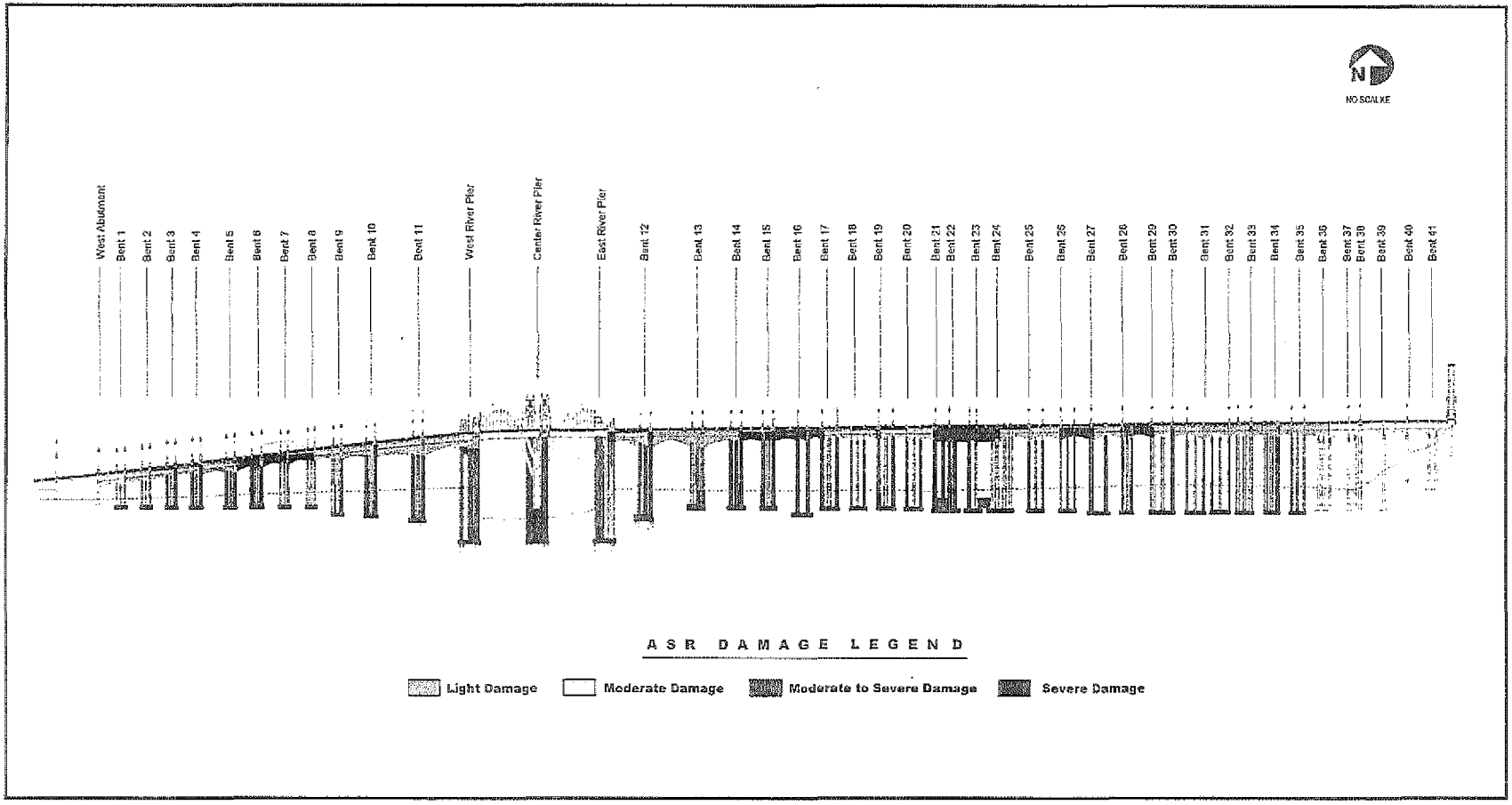


Figure 3 Level of Damage in Various Elements of the 6th Street Viaduct due to ASR

2.3 Resolve Design Deficiencies

The National Bridge Inspection Standards (23 CFR 650) apply to all structures defined as bridges located on public roads. Inspection records and bridge inventories are maintained in accordance with the standards through the Caltrans Structure Maintenance and Investigations *Bridge Inspection Records Information* report. Each bridge is to be inspected at regular intervals not to exceed 2 years.

Based upon the inspection records and bridge inventory data, a sufficiency rating is calculated for a particular bridge. The sufficiency rating is a method of evaluating highway bridge data by calculation of four separate factors to obtain a numeric value that is indicative of the adequacy of the bridge to remain in service. The result of this method is a percentage where 100 percent would represent an entirely sufficient bridge and zero percent would represent an entirely insufficient (deficient) bridge. These factors include:

1) Structural adequacy and safety, up to 55 percent
2) Serviceability and functional obsolescence, up to 30 percent
3) Essentiality for public use, up to 15 percent
4) Special reductions, up to 13 percent

The City-owned viaduct (Bridge No. 53C-1880) has a sufficiency rating of 52.4[4]. The major factors contributing to the low sufficiency rating of the structure include:

- Cracking and condition of deck, superstructure, and substructure elements
- Inadequate roadway width
- Out of specification bridge and approach railing, and approach rail ends
- Poor roadway alignment
- Out of specification geometric and seismic detail design

Although the Caltrans-owned bridge (Bridge No. 53-0595) was retrofitted in 1995, roadway width and railing deficiencies were not corrected.

3. Alternatives Considered

The Project Development Team (PDT) conducted study and research of 10 retrofit schemes, 20 replacement alignment corridors, and 15 bridge types (concepts) to identify the retrofit and replacement schemes for evaluation in the EIR/EIS. Input from the general public, interested

[4] Caltrans. 2006. Bridge Inspection Records Information, Structure Inventory and Appraisal Report, Bridge No. 53C-1880, California Department of Transportation, Structure Maintenance and Investigation. August.

parties, and world-renowned experts were considered as part of the alternative screening and ranking to finalize the alternatives to be carried forward for further study.

The evaluation criteria used for screening the retrofit schemes and alignment corridors are summarized below:

- Ability to meet the project purpose and need
- Constructability
- Life span of the facility
- Construction cost
- Maintenance cost
- Extent of environmental impact and community disruption
- Structural safety
- Historic preservation
- Other enhancement opportunities

The evaluation criteria used for screening the bridge concepts include:

- Seismic performance
- Geometric flexibility
- Roadway and pedestrian safety
- Future river access from deck level
- Aesthetics
- Historical compatibility
- Design schedule
- Hydraulic impacts
- Environmental impacts
- Utility impacts
- Railroad impacts
- Construction cost
- Construction schedule
- Construction risk
- Constructability
- Maintenance and serviceability

Based on the results of the alternatives evaluation, a No Action Alternative, a Retrofit Alternative, and a Replacement Alternative with three (3) alignments and five (5) bridge types were identified as the most reasonable and feasible for full environmental impact assessment. A brief description of each alternative is provided below.

3.1 Alternative 1 – No Action

This alternative provides neither retrofit nor replacement of the seismically and functionally deficient 6th Street Viaduct. The ASR deterioration of the structure would continue, and the seismic vulnerabilities would worsen as the concrete strength continues to deteriorate. The City would provide ongoing inspection and maintenance on the viaduct to keep it open to traffic as long as possible, given the ongoing ASR deterioration and seismic vulnerabilities. The 6th Street Viaduct would remain at its existing roadway width of 46 ft, which accommodates two travel lanes in each direction with no outside shoulders or safety median. None of the design deficiencies would be corrected under this alternative.

3.2 Alternative 2 – Viaduct Retrofit

Two retrofit schemes were initially identified for detailed study and evaluation in the EIR/EIS, including Infill Wall and Heavy Steel Casing, and Substructure Replacement; however, the Substructure Replacement scheme was later withdrawn from further evaluation because of its higher cost compared to the Infill Wall and Heavy Steel Casing scheme to obtain similar results of the same design life.

Under this alternative, the viaduct's columns would be retrofitted by encasing them with steel, and infill walls would be constructed between selected columns. In addition, new foundations, grade beams, retrofitting of bent caps, and closure of some expansion joints in the superstructure would be constructed in combination with the column retrofits. The structure would be retrofitted to the minimal standard of "no collapse" for a major earthquake (a magnitude 7.3 on the Richter scale).

Alternative Components

Column Retrofit. Under this retrofit alternative, 76 columns would be encased, of which 26 would utilize 7/8-inch plates and 50 would utilize 5/8-inch steel plates. A 6-inch layer of architectural mortar would conceal the exposed plates, channels, and bars (Figure 4). All exterior columns with "Light" or "Moderate" damage ratings would also be encased to account for future concrete degradation due to ASR expansion. Encasing all exterior columns would also maintain visual balance and consistency for the retrofitted structure. The interior columns in Bents 1, 4, and 5 would be encased to enhance their shear strengths. Bent 12 would be excluded from retrofitting because of the lack of space available for construction of the column encasement due to the proximity of railroad tracks.

Infill Walls, New Foundations, Grade Beams, and Closure of Expansion Joints. Infill shear walls would be constructed between the columns to reduce transverse seismic movements of the structure. Grade beams would be constructed below ground between the existing pile caps to

reduce longitudinal seismic movement of the structure. Expansion joints in the superstructure would be reconstructed at Bents 27 and 33, connecting adjacent spans to reduce seismic longitudinal displacement demands for the East Approach Spans. Figure 5 is an artist's rendering of the retrofitting with infill wall.

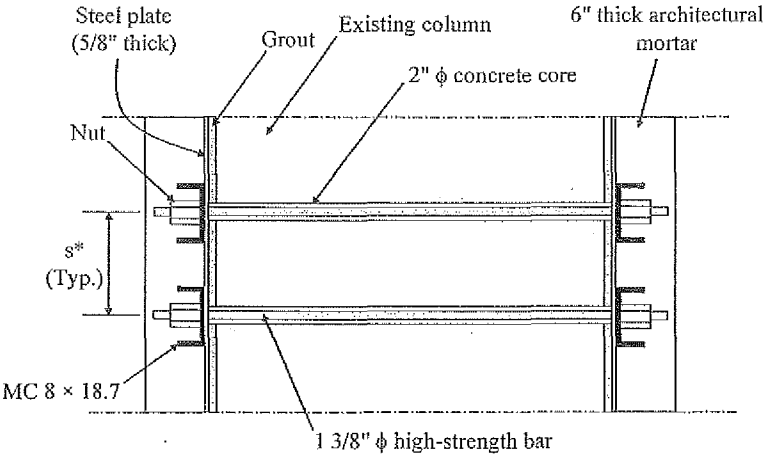
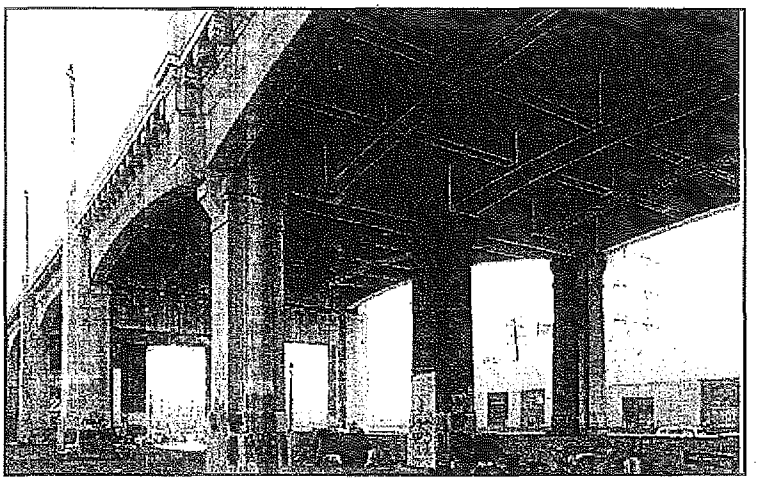


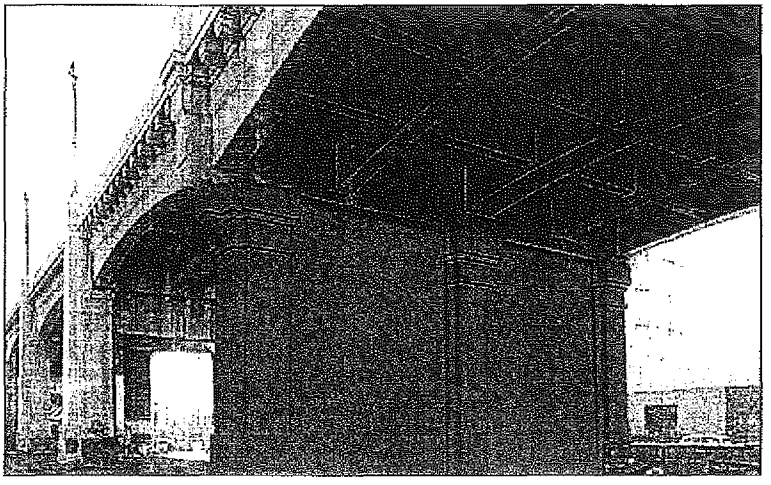
Figure 4 Steel Encasement of Columns

Bent Caps Retrofit. Retrofitting of bent caps would ensure that the expected seismic damage would take place in a controlled fashion. Retrofitting of bent caps for flexural strength enhancement is proposed at 16 bents (excluding Bents 27 and 33 where expansion joints would be closed). Bent cap retrofit would be achieved by means of concrete bolsters, which would be bonded to the existing bent caps by dowels that run through pre-drilled cores in the bent caps. Continuity of the concrete bolsters along the length of the bent cap would be achieved by post-tensioning of high-strength bars that would run through pre-drilled cores in the superstructure girders (see Figure 6). The post-tensioning bars would be anchored at their ends by exterior steel plates; these exposed plates and the bars would also be concealed by mortar.

Bent caps at locations of expansion joints would be retrofitted, as shown schematically in Figures 7 and 8. The positive flexural moment capacity would be enhanced by adding drop caps at the soffit of the existing bent caps. The new drop caps would be bonded to the existing bent caps by dowels. Steel plates would be placed along the sides of the bent caps and bonded to the concrete by means of high-strength bars inside core holes. The steel plates would enhance flexural capacity and resistance to horizontal shear.



Existing View



View after Retrofitting (showing a sample of in-fill wall at one column)

Figure 5 Artist's Rendering of Viaduct Retrofit

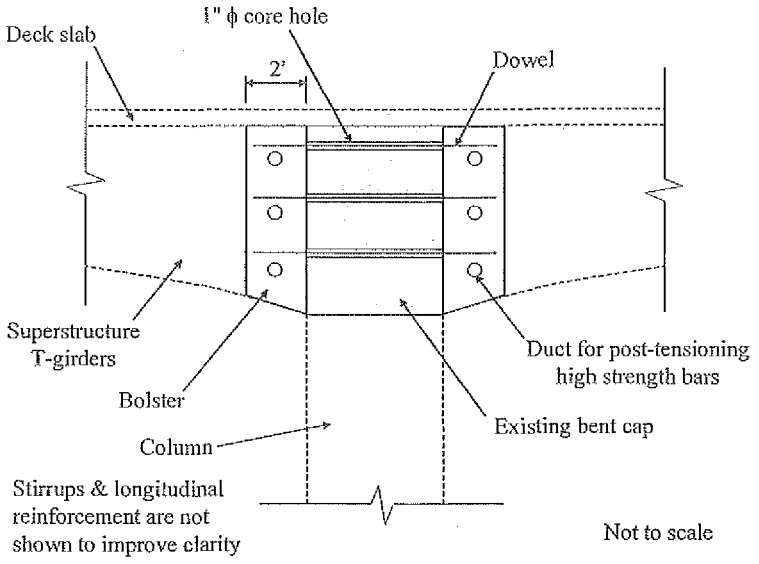


Figure 6 Retrofitting of Bent Caps by Concrete Bolsters

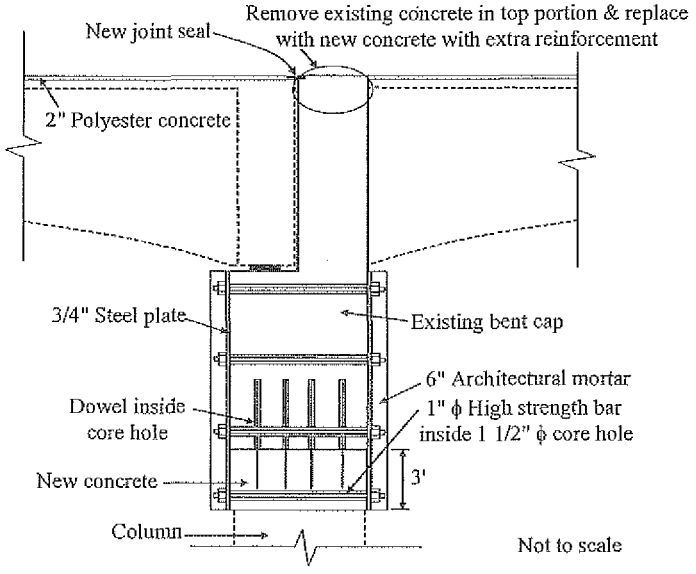


Figure 7 Bent Cap Retrofit at Expansion Joints (one simply supported span)

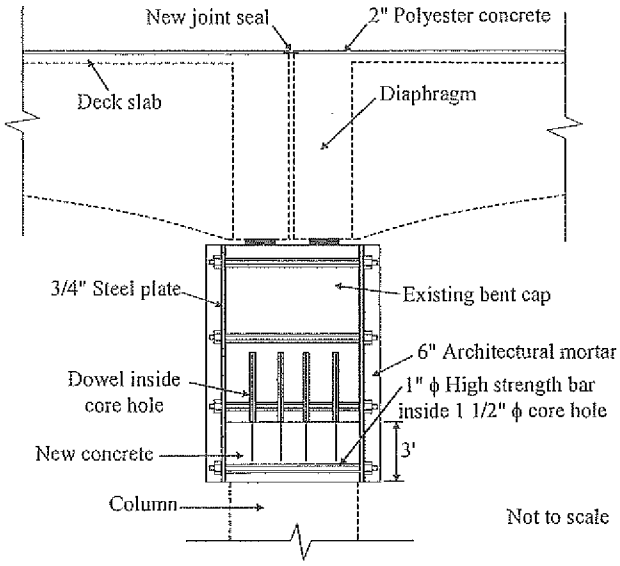


Figure 8 Bent Cap Retrofit at Expansion Joints (two simply supported spans)

River Piers Retrofit. The river piers would be retrofitted by placing infill walls between columns at the West and East River Piers. In addition, new pile foundations would be constructed around the existing foundations at the West and East River Piers to confine the poor lap-splices of the longitudinal column reinforcement and to allow column bases to develop their full plastic moment capacities.

New Expansion Joint Seals. Installation of new expansion joint seals is essential for long-term efficiency of the retrofit design because it helps protect the substructure from direct water flow onto concrete members. Additional moisture at the concrete surface can accelerate the ASR and subsequent concrete damage. Figures 7 and 8 show the proposed new expansion joint seals.

Design Life

The current design standard for seismic retrofit is to prevent failure (collapse) of the structure when it is subject to the maximum credible earthquake (MCE). The retrofit design life expectancy to prevent seismic collapse under the MCE event and loss of structural strength due to ASR deterioration is approximately 30 years. Based on AASHTO guidelines, design life is the period of time that a bridge is expected to be in operation. New bridge structures are designed to have a structural design life of 75 years.

Design Standards

The viaduct's roadway does not meet the City's design standards for a Secondary Highway, and substantial physical changes to the superstructure would not be part of this alternative. Existing

nonstandard viaduct features would continue to exist (i.e., inadequate sidewalk width; absence of safety median and shoulders; and inadequate stopping sight distances). The retrofit alternative would also not replace the existing barrier rails, which do not meet current crash-test standards. Consistent with Caltrans requirements, the retrofit design would only be for the prevention of collapse under the design seismic event, and the damaged bridge would have to be replaced after a major earthquake.

Estimated Alternative Cost

The construction and ROW costs of Alternative 2 – Viaduct Retrofit using the infill wall and heavy steel casing method are estimated at $199 million (as of 4th quarter 2010).

3.3 Alternative 3 – Viaduct Replacement

This alternative would construct a new viaduct along one of the three alignments under study. The entire viaduct structure (including Bridge Nos. 53C-1880 and 53-0595) would be constructed using a Cast-in-Place Multiple Cell Post-Tensioned Box Girder. The main-span bridge type would be selected from one of the five alternatives under consideration. The design life expectancy of Alternative 3 is 75 years.

3.3.1 Viaduct Alignments

Three viaduct replacement alignments (i.e., 3A, 3B, and 3C) were carried forward for design consideration, as shown in Figure 9. A description of each alignment is provided below.

Alignment 3A. The replacement structure would be built along a new horizontal alignment. The new structure within the City's ROW would have a cross section that meets secondary highway standards as required by the City of Los Angeles Department of Transportation (LADOT). The new roadway would have a maximum width of 70 ft (curb-to-curb) and would consist of two 11-ft-wide lanes in each direction, a median with a maximum width of 10 ft, and outside shoulders with a maximum width of 8 ft, which would incorporate future bicycle lanes. The proposed cross section would also allow for sidewalks with a maximum width of 10 ft. Bridge rails located on the outside edges of the structure would have a width of 2 ft. The typical width to the outside of the bridge rails would be 94 ft maximum.

The cross section within Caltrans' ROW (over US 101) would be slightly different. In this section, the viaduct roadway would be 74 ft, curb to curb, consisting of two 12-ft-wide lanes in each direction, a 10-ft-wide median, and 8-ft-wide shoulders. The proposed cross section also allows for 8-ft-wide sidewalks on both sides of the structure.

The new viaduct structure would extend east from Mateo Street to just east of US 101. The new roadway design has a transition on the west side of the river from the existing street width at Mill Street to the ultimate width of the proposed 6th Street Viaduct Replacement Alternative at Mateo Street. Because of the wider viaduct replacement structure, the north side of the viaduct footprint would extend farther to the north, while the south side of the footprint would remain essentially at the same location except for the segment of the alignment over the Los Angeles River, which would be shifted slightly to the south to improve the horizontal curve radius and provide improved safety.

Alignment 3B (Preferred Alternative). The new viaduct would be designed with the same cross section as Alignment 3A. This option proposes a horizontally curved alignment from Santa Fe Avenue to west of US 101. The curve in the alignment is more gradual than Alignment 3A. This alignment, similar to Alignment 3A, maintains its present location on the south side of the existing bridge from Mateo Street to Santa Fe Avenue, and the alignment shifts to the north from Santa Fe Avenue to the east as it crosses over the river. This alignment would swing to the north approximately 85 ft farther than the existing alignment on the east side of the river, which would upgrade the existing nonstandard curve radius at the east end.

A modification to Alignment 3B was evaluated in an effort to reduce ROW impacts in response to public input; however, the 3B modified design option uses smaller radius curves and is geometrically inferior to Alignment 3B. In addition, cost savings would be less than 1 percent of Alignment 3B, which is considered negligible; therefore, the 3B modified design option was not carried forward for further consideration as a full alignment alternative for the purpose of environmental analysis in the EIR/EIS.

Alignment 3C. The new viaduct would be designed with the same cross section as Alignment 3A. To accommodate the wider viaduct, the footprint of the viaduct would be extended on the north and south sides, except for the area between Mateo Street and Mesquit Street, which would be wider to the north only. The segment that extends from the river to the east would be constructed so that the columns and foundations lie within existing ROW and the viaduct roadway deck extends beyond the existing ROW over adjacent private properties.

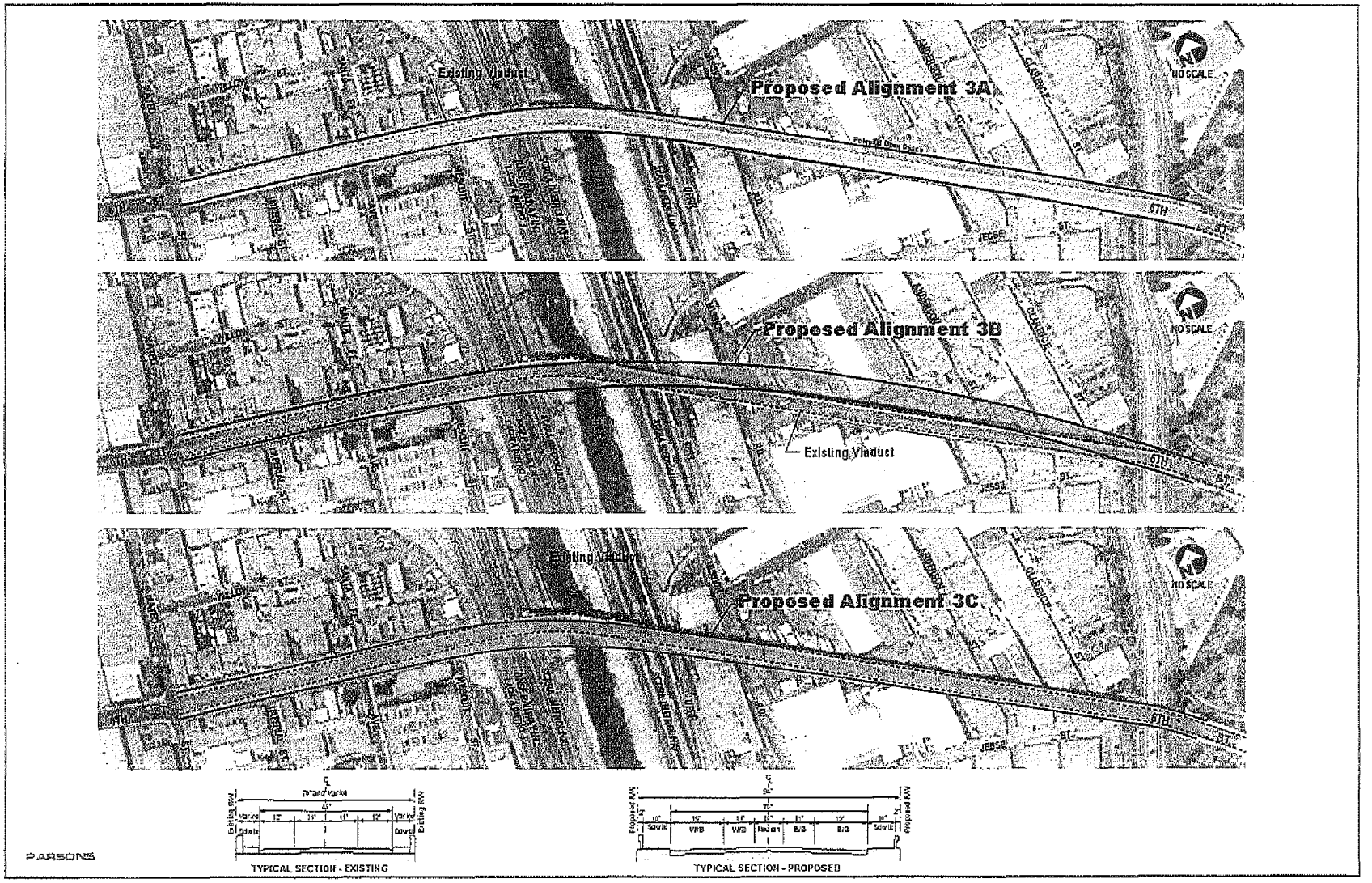


Figure 9 Alignment Corridors 3A, 3B, and 3C

3.3.2 Bridge Concepts

Fifteen (15) bridge concepts (types) were developed during the initial phase of project studies and were screened down to five concepts (i.e., Concepts 1, 2, 3, 4, and 5) as viable designs for further consideration. Refinement of Bridge Concepts 1 and 4 (called 1A and 4A) were later added as a result of public and agency input during the public review period of the Draft EIR/EIS. Each bridge concept, including refined Concepts 1A and 4A, could be constructed on any of the viaduct replacement alignments (i.e., 3A, 3B, or 3C). The City will refine final design of the bridge replacement as a means to ensure selection of an architecturally distinctive and cost-effective design.

Bridge Concept 1 – Main Span Replication. The new replica bridge could capture the essence of the old landmark bridge with its decorative off-set corner elements, steel arches, "deco" detailing, and off-set of planes at the pier walls, as well as the corners with decorative dentil detailing below the concrete barrier along the entire length of the viaduct. The structure could mimic the original design with complimentary dual arches. The new main center pylon with its belvederes would maintain the pedestrian viewing areas of the original 1932-designed belvederes. In addition, the pylons, which historically extended above the bridge deck until removal in the 1950s, could be replicated in the replacement structure of Bridge Concept 1, as shown in Figure 10.

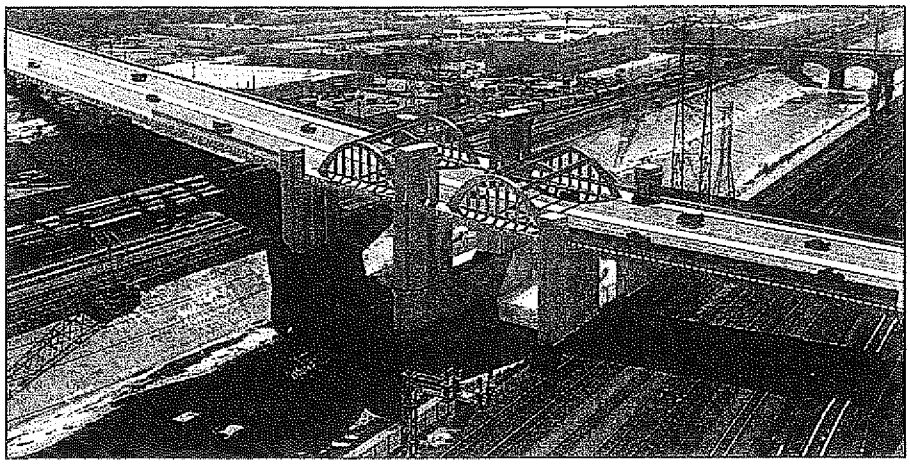


Figure 10 Computer Model of Bridge Concept 1

Bridge Concept 1A would be identical to Bridge Concept 1 between the riverbanks, mimicking the original design with complimentary dual arches and main center pylon with its belvederes maintaining the pedestrian viewing areas of the original 1932-designed belvederes. Unlike Bridge Concept 1, which employs long-span box girders with fewer columns east and west of the river similar to the other replacement concepts, refinement Bridge Concept 1A would replicate

the short-span haunched girders with numerous support columns of the original structure from the riverbanks to the ends of the viaduct. However, the total project cost for Concept 1A was found to be significantly higher than the other bridge concepts and was not considered a reasonable expenditure of public funds; therefore, Bridge Concept 1A was eliminated from further consideration.

Bridge Concept 2 – Cast-in-place Box Girder with Steel Tied Arch Pedestrian Ways. The design of Bridge Concept 2 could employ a combination of some of the structural elements proposed for Bridge Concept 1 (Figure 11). The main span of the bridge would be a concrete box girder, with gateway monuments at each end. In addition, the pedestrian path would be separated from the bridge deck at the main span, allowing pedestrians to enjoy a different experience while crossing the bridge.

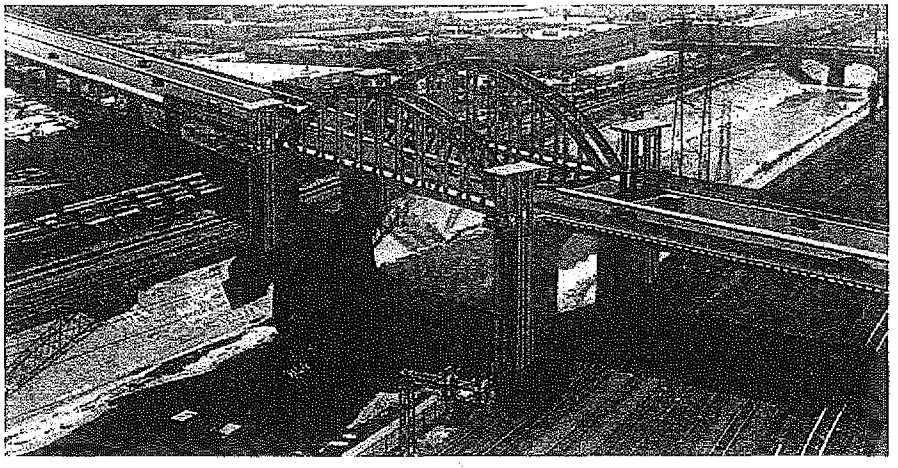


Figure 11 Computer Model of Bridge Concept 2

The main-span piers would act as entrance monuments and become an integral component in the massing and scale of the bridge. The arches on the main span would anchor themselves to these vertical piers, allowing them to act as a main-span gateway to the flow of traffic on the bridge. The pedestrian and driver would take a visual cue as to where the river edges begin and end.

Bridge Concept 3 – Steel Half-Through Arch with CIP Box Girder Approaches. The design of Bridge Concept 3 would pick up structural elements found on the original half-through arch of the landmark main span (Figure 12). Reaching over the Los Angeles River, the new half-through arches would intersect the bridge deck and nestle into the embankment piers. The lateral tie beams between the arches above the deck could be similar in cross section to that of the arch and vertical structural members of the original bridge.

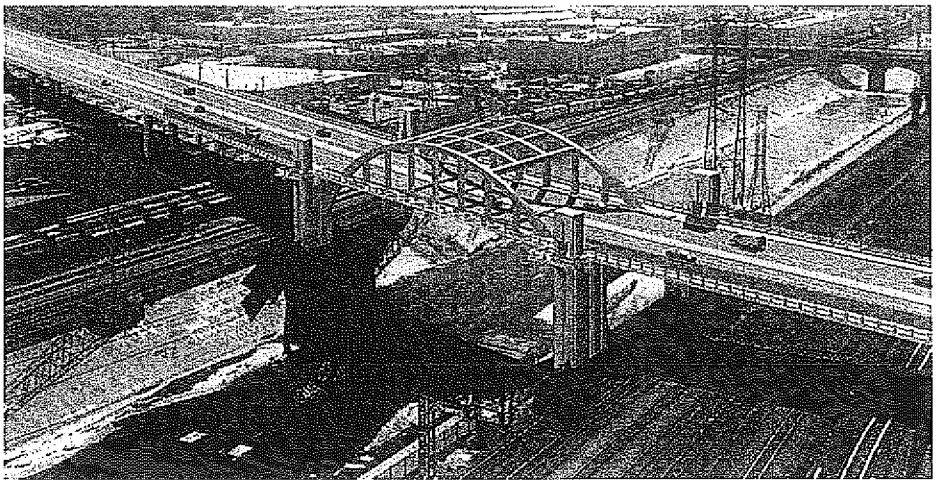


Figure 12 Computer Model of Bridge Concept 3

Bridge Concept 4 – Extradosed Concrete Box Girder (Preferred Alternative). Bridge Concept 4, a contemporary cable-supported structure, would present a 21st century structural principle that introduces a relatively new technology to the United States (Figure 13). This extradosed concept bridge could invoke a uniquely modern statement over the river.

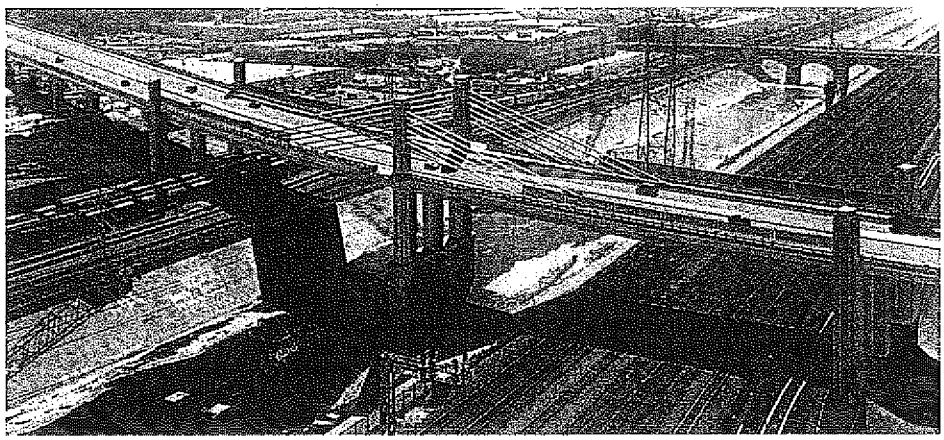


Figure 13 Computer Model of Bridge Concept 4

The PDT recommended the design principle of Bridge Concept 4, cable-supported river spans with one central pier that clear the railroad tracks and avoids the overhead 230-kilovolt (kV) power lines, be the preferred alternative. A range of design expressions of this principle, including Bridge Concept 4A with six towers representing 6th Street as one example (see Figure 14), could be considered during final design.

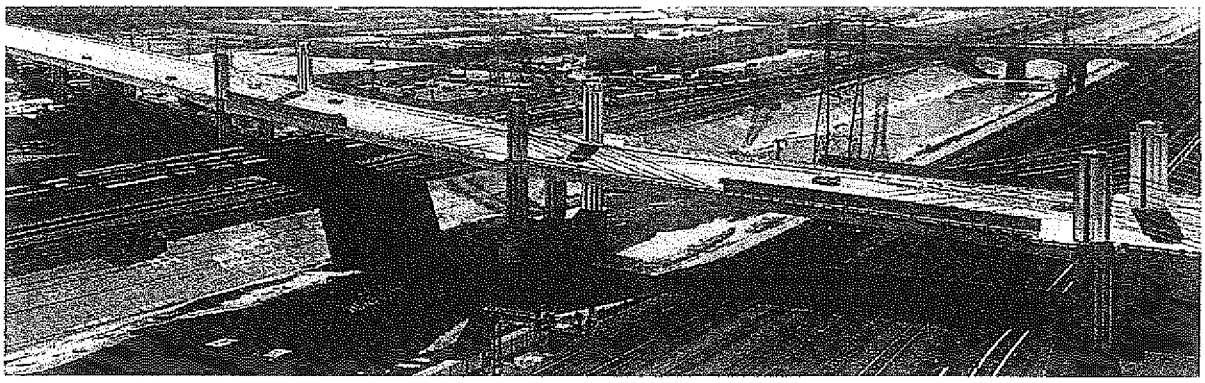


Figure 14 Computer Model of Bridge Concept 4A

Bridge Concept 5 – Extradosed Concrete Box Girder with Single Pylon. Bridge Concept 5 is another potential design expression of the extradosed bridge principle. This expression features extradosed structures with towers and cables aligned along the center of the bridge and viaduct approaches (Figure 15). This particular expression utilizes six bridge towers as symbolically representative of 6th Street. The top of each tower could be illuminated to enhance the nighttime effect.

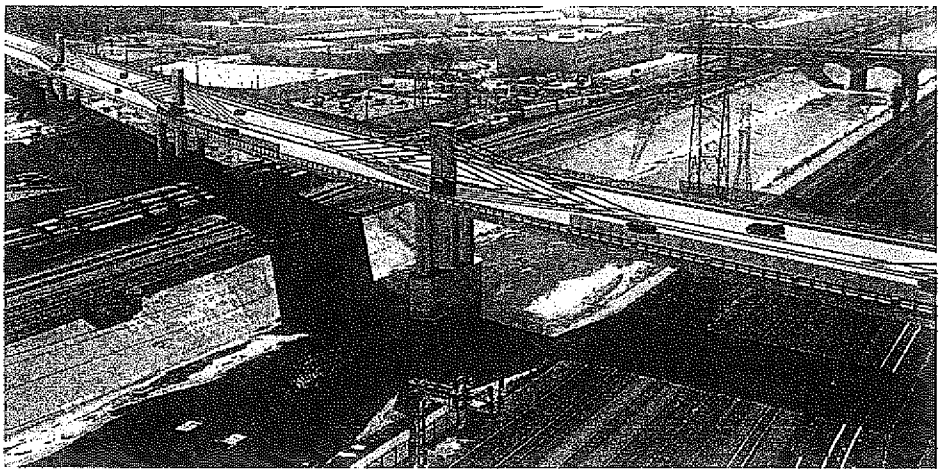


Figure 15 Computer Model of Bridge Concept 5

3.3.3 Other Roadway Improvements

In addition to improving the geometry of the 6th Street Viaduct, other areas of consideration for roadway design include the transitions from the viaduct at the east and west ends to the existing street (see Figures 16 and 17), as well as the local streets under the viaduct.

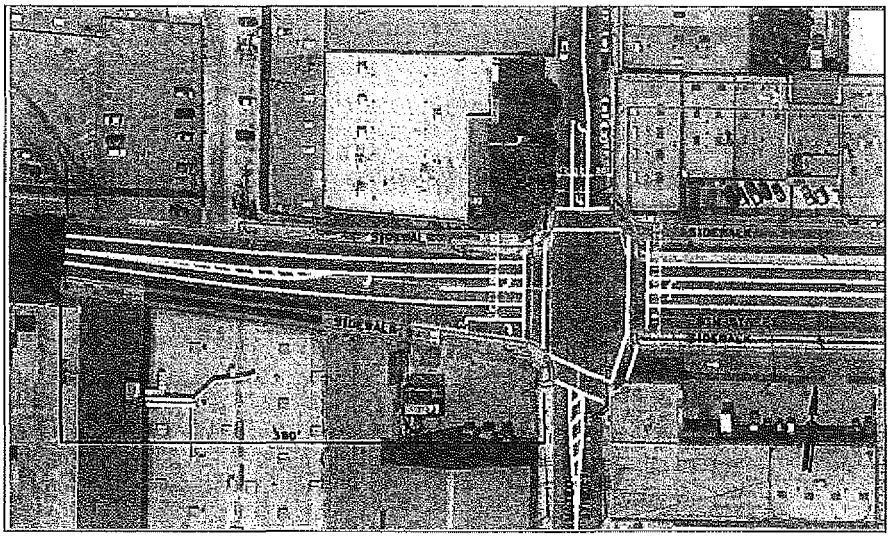


Figure 16 West End Transition Configuration

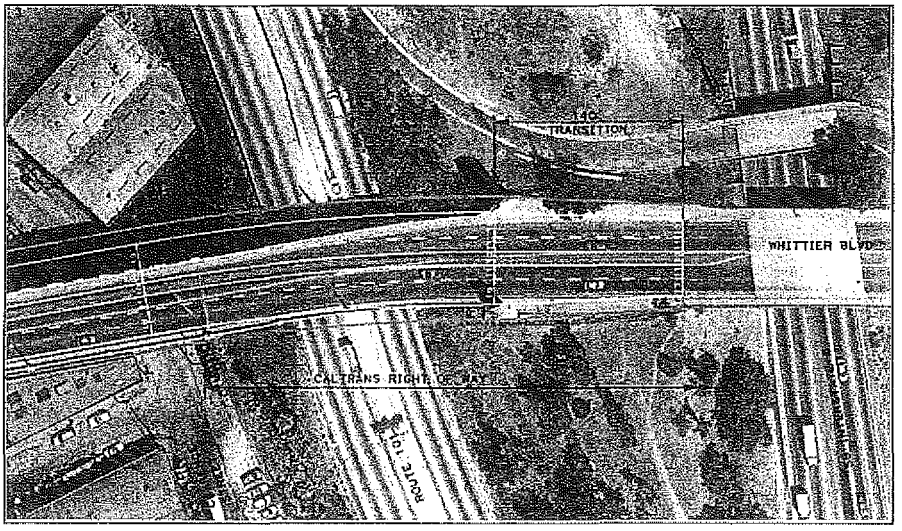


Figure 17 East End Transition Configuration

On Mateo Street at the west end of the viaduct, the proposed section would be aligned with the existing lane configuration by using a 380-ft transition that would consist of striping and minor modifications to the existing sidewalk and curb and gutter. The existing traffic signal masts would be modified to match the proposed transitions. A left-turn lane along Mateo Street would be provided to allow southbound traffic to access the eastbound direction on 6th Street. This improvement would provide a safer lane configuration and better vehicular traffic movement.

On the east end of the viaduct, the proposed 94-ft section would taper to match the existing 58-ft section through a 165-ft transition. No additional lanes would be added, and no modifications to the existing sidewalk would be made.

Portions of the existing street crossings under the viaduct may need to be reconstructed for an approximate length of 200 ft on both sides of the viaduct. These improvements may be done in a way that creates opportunities for landscaping.

As part of the construction of any alignment and bridge concept under Alternative 3, several roadway improvements at nearby intersections would be undertaken to maintain traffic operation during the construction period when the viaduct would have to be closed.

- 6th Street/Boyle Avenue Intersection: The proposed operational improvements at this intersection would (1) modify signal phasing for the east-west direction to run as opposed phasing, (2) convert the Number 1 westbound through lane to a left-turn lane, (3) modify signal phasing to add a southbound left-turn phase, and (4) extend the southbound left-turn lane by approximately 75 ft.
- 7th Street/Boyle Avenue Intersection: Signal phasing would be modified to add an eastbound left-turn phase.
- 3rd Street/Central Avenue Intersection: Signal phasing would be modified to add a northbound left-turn phase.
- 3rd Street/Alameda Street Intersection: Signal phasing would be modified to add a northbound left-turn phase.
- 6th Street/Alameda Street Intersection: Signal phasing would be modified to add a northbound left-turn phase.
- 6th Street/Central Avenue Intersection: Signal phasing would be modified to add a southbound left-turn phase.
- 5th Street/Central Avenue Intersection: New traffic signals would be installed at this location.

In addition to modifying the signal phasing of traffic signals at nearby intersections, several other intersections would be impacted by the traffic detours. Mitigation measures have been proposed to mitigate these impacts as follows:

- 4th Street and US 101 Southbound Off-Ramp: Install new traffic signals and connect to Los Angeles City Automated Traffic Surveillance and Control (ATSAC) System.
- 4th Street and US 101 Southbound On-Ramp: Install new traffic signal and connect to Los Angeles City ATSAC System.
- 4th Street and Soto Street: Restripe to add an eastbound right-turn lane.

Design Standards

The proposed replacement alternative would be designed to meet the City's current street and street lighting design standards. The structural design for the replacement alternatives would meet AASHTO bridge design standards and Caltrans seismic design criteria.

Estimated Cost for Replacement Alternative

Table 1 presents estimated costs of each replacement bridge concept constructed on the three alignments evaluated. As can be seen, the construction and ROW costs for Bridge Concepts 1 through 5 vary from a low of $307 million to a high of $367 million (with the eliminated Bridge Concept 1A estimated at $408 million) for Alignment 3A; from a low of $306 million to a high of $369 million for Alignment 3B (with the eliminated Bridge Concept 1A estimated at $405 million); and from a low of $320 million to a high of $371 million for Alignment 3C. All estimates are based on 4th quarter 2010 costs.

Table 1. Viaduct Replacement Estimated Costs

Cost Item	Cost Estimate (midyear of construction dollars: 2014/2015)		
	Alignment 3A	Alignment 3B	Alignment 3C
Bridge Concept 1			
Construction cost	240,735,000	237,542,000	254,505,000
ROW	96,411,000	97,807,000	94,375,000
TOTAL	337,146,000	335,349,000	348,880,000
Bridge Concept 1A			
Construction cost	306,150,000	302,635,000	NC
ROW	102,421,000	102,421,000	NC
TOTAL	408,571,000	405,056,000	NC
Bridge Concept 2			
Construction cost	211,280,000	208,156,000	225,263,000
ROW	96,411,000	97,807,000	94,375,000
TOTAL	307,691,000	305,963,000	319,638,000
Bridge Concept 3			
Construction cost	222,007,000	218,916,000	235,971,000
ROW	96,411,000	97,807,000	94,375,000
TOTAL	318,418,000	316,723,000	330,346,000
Bridge Concept 4			
Construction cost	210,408,000	207,330,000	224,608,000
ROW	97,746,000	98,605,000	95,261,000
TOTAL	308,154,000	305,935,000	319,869,000
Bridge Concept 4A			
Construction cost	223,523,000	220,008,000	237,723,000
ROW	97,746,000	98,605,000	95,261,000
TOTAL	321,269,000	318,613,000	332,984,000
Bridge Concept 5			
Construction cost	269,165,000	270,095,000	276,265,000
ROW	97,746,000	98,605,000	95,261,000
TOTAL	366,911,000	368,700,000	371,526,000

Cost Estimates as of 4th quarter 2010.

NC Bridge Concept 1A is not econonically possible on Alignment 3C because columns of the approaches would require taking ROW along the south and north edges of the viaduct.

4. Environmental Impacts

Environmental impacts associated with the No Action Alternative and two build Alternatives were fully analyzed according to federal, state, and local requirements, and the findings are summarized in Table 2.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Land Use and Planning	None	• Up to 19 businesses would be affected, 2 of which would be subject to relocation. These right-of-way (ROW) displacements would be inconsistent with the City of Los Angeles Community Plan objective of preserving the industrial area and employment. • Would not provide the City with an opportunity to designate 6th Street along the 6th Street Viaduct as a bikeway. • Would provide a seismically safe bridge, with a 30-year design life, between Boyle Heights and Downtown Los Angeles to support the objectives of various adopted plans and policies. • Would provide less redevelopment opportunity for the area in the immediate vicinity of the viaduct.	• Up to 30 businesses would be affected, 11 of which would be subject to relocation. These businesses are located in the designated "industrial preservation and employment protection zone," the proposed action would be inconsistent with the Community Plan. • Would have a bikeway and standard sidewalk on both sides of the viaduct. • Would provide a seismically safe bridge, with a 75-year design life, between Boyle Heights and Downtown Los Angeles to support the objectives of various adopted plans and policies. • Would provide redevelopment opportunities for the unused portion of the acquired land in the immediate vicinity of the viaduct. • Impact level would be the same for any bridge concept.	• Up to 33 businesses would be affected, 11 of which would be subject to relocation under Alignment 3B. These businesses are located in the designated "industrial preservation and employment protection zone." Inconsistent with the Community Plan. • Would have a bikeway and standard sidewalk on both sides of the viaduct. • Would provide a seismically safe link, with a 75-year design life, between Boyle Heights and Downtown Los Angeles to support the objectives of various adopted plans and policies. • Would provide redevelopment opportunities for the unused portion of the acquired land in the immediate vicinity of the viaduct. • Impact level would be the same for any bridge concept.	• Up to 30 businesses would be affected, 8 of which would be subject to relocation under Alignment 3C. These businesses are located in the designated "industrial preservation and employment protection zone." Inconsistent with industrial preservation objective. • Would have a bikeway and standard sidewalk on both sides of the viaduct. • Would provide a seismically safe bridge, with a 75-year design life, between Boyle Heights and Downtown Los Angeles to support the objectives of various adopted plans and policies. • Would provide redevelopment opportunities for the unused portion of the acquired land in the immediate vicinity of the viaduct. • Impact level would be the same for any bridge concept.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Community Character and Cohesion	None	• Community disconnection could occur on a temporary basis during construction.	• Loss of historic resource and community landmark to which many residents are attached. • Based on some input from the public, Bridge Concept 1 (main span replication) would likely be perceived as keeping the old community icon, whereas Concepts 4, 4A, and 5 (modern cable-supported bridge) would be viewed as a new community icon.	Same as Alignment 3A.	Same as Alignment 3A.
Relocation and Business Disruption	None	• Construction would require a partial lane closure on the 6th Street Viaduct. Temporary blockage of roadways would occur during construction due to the required partial traffic lane closure and construction equipment movement. • Up to 19 businesses would be affected, 2 of which would be subject to relocation. • Minimal employment impacts.	• The viaduct and all acquired buildings would be first removed. Roadway blockage to the remaining businesses would temporarily occur during the demolition and construction activities. • Up to 30 businesses would be affected, 11 of which would be subject to relocation. • Approximately 200 employees may experience temporary job loss. Long-term job loss is not anticipated because most of the affected businesses have expressed interest in staying in Downtown Los Angeles. • Impact level would be the same for any bridge concept.	• The viaduct and all acquired buildings would be first removed. Roadway blockage to the remaining businesses would temporarily occur during the demolition and construction activities. • Up to 33 businesses would be affected, 11 of which would be subject to relocation under Alignment 3B. • Approximately 200 employees may experience temporary job loss. Long-term job loss is not anticipated because most of the affected businesses have expressed interest in staying in Downtown Los Angeles. • Impact level would be the same for any bridge concept.	• Although many buildings adjacent to the bridge would not have to relocate, roadway blockage to these businesses would cause operational disruption during the 4-year demolition and construction period. • Up to 30 businesses would be affected, 8 of which would be subject to relocation. • Approximately 200 employees may experience temporary job loss. Long-term job loss is not anticipated because most of the affected businesses have expressed interest in staying in Downtown Los Angeles. • Impact level would be the same for any bridge concept.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Environmental Justice	None	• The project study area contains predominantly minority and low-income populations compared to the larger area within the city and county of Los Angeles. Construction would require partial lane closures on the 6th Street Viaduct. Construction of Alternative 2 would cause disproportionately high adverse effects on minority and/or low-income populations living closer to the construction zone as per Executive Order 12898 regarding environmental justice.	• Construction would require full closure of the 6th Street Viaduct. Construction of the Replacement Alternative would cause disproportionately high adverse effects on minority and/or low-income populations who live closer to the viaduct and the proposed detour routes as per Executive Order 12898 regarding environmental justice • Residents in the area adjacent to the viaduct would receive higher benefit from the opportunity to redevelop the area as a result of the proposed project. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.
Utilities and Emergency Services	None	• Temporary or permanent relocation of some utility services may be required. • Disruption to railroad operations during construction. • Permanently reduce horizontal clearance between the center of existing tracks and the retrofitted columns of the viaduct by approximately 1 ft. • Partial lane closure on the 6th Street Viaduct during the 2.5-year construction period would delay emergency response services.	• Temporary or permanent relocation of some utility services would be required. • Disruption to railroad operations during construction. • Full closure of the 6th Street Viaduct during the 4-year construction period would delay emergency response services. • Beneficial effects from providing the median and shoulders for emergency use. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No-Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Traffic, Transportation, Pedestrian Facilities	None	• Construction would cause localized, temporary traffic disruption, sidewalk blockage, and parking space obstruction. • Possible loss of some currently permitted parking spaces underneath and along the local streets near the viaduct, creating inconvenience to area residents and businesses. • Minor disruption to public transit operations due to possible partial lane closures on the 6th Street Viaduct.	• Construction would require full closure of the 6th Street Viaduct for up to 4 years, resulting in traffic detours along the street network east and west of the river. Traffic analysis revealed up to 13 out of 31 intersections under study would be impacted by detouring traffic. Temporary access restriction would occur around the construction zone. Sidewalk closure requiring rerouting of pedestrians, and the loss of approximately 50 public parking spaces around the viaduct would also occur during the construction phase. • Loss of public parking spaces underneath and along the local streets near the viaduct would create inconvenience to area residents and businesses. • Travel delays of 5 to 10 minutes on public transit would occur from traffic detours. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Visual/Aesthetic	None	• Retrofit would encase most of the existing columns with heavy steel covered by architectural mortar creating a more massive column configuration. In addition, construction of sheer walls between many of the columns would limit many of the views under the viaduct. Although these changes would likely go unnoticed by the general public from the distance, the view restriction under the viaduct deck could affect activities such as filming.	• Replacement of the viaduct and the subsequent loss of the historic landmark would impact the views to the structure. The various bridge replacement concepts would be expected to alter the existing views to varying degrees. The most notable visual impact would be from replacement of the historic structure with a new structure of contemporary design (i.e., the cable-supported design); however, each of the designs analyzed would maintain the vividness/memorability, unity, and visual intactness experienced with the current viaduct structure. • Modern Bridge Concepts 4, 4A, and 5 would likely include architectural lighting. It is likely that the accent lighting would be a noticeable addition to the nighttime viewscape.	Same as Alignment 3A.	Same as Alignment 3A.
Cultural Resources	None	• The project area has the potential for buried archaeological materials to be encountered during ground disturbance. • Retrofitting would alter and/or destroy the historic materials, features, and spatial relationships that characterize the viaduct, resulting in an adverse effect under 36 CFR 800.5(a)(2), criterion ii.	• The project area has the potential for buried archaeological materials to be encountered during ground disturbance. • Replacement of the viaduct would result in an adverse effect under 36 CFR 800.5(a)(2), criterion i. • The viaduct would be removed from the citywide inventory of historic bridges over the Los Angeles River, impacting the City's remaining monumental resources on a cumulative basis.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Hydrology and Floodplains	None	None	• Construction of Bridge Concept 1 would adversely affect the river hydraulics upstream of the viaduct due to the larger pier size. • Construction of other bridge types (2, 3, 4, 4A, 5) would have either negligible or beneficial impacts to the river hydraulics.	Same as Alignment 3A.	Same as Alignment 3A.
Water Quality and Stormwater Runoff	All stormwater runoff from the viaduct would continue to be discharged to the Los Angeles River without prior treatment.	• No permanent treatment best management practice (BMP) devices would be installed with this alternative; all stormwater runoff from the viaduct would continue to be discharged to the Los Angeles River without prior treatment.	• Stormwater from the new viaduct would be treated before discharging to the Los Angeles River. • Implementation of Bridge Concept 1 would result in a net increase of the placement of fill area in the Los Angeles River. Other bridge concepts would result in a net decrease of the placement of fill area in the river.	Same as Alignment 3A.	Same as Alignment 3A.
Geology, Soils, Seismicity	The viaduct would continue to deteriorate from ASR weakening the concrete elements.	• Alternative 2 would design the retrofitted features to prevent collapse under a design seismic event. Due to access restrictions near the railroad, Bent 12 would not be retrofitted. The design life expectancy to prevent seismic collapse under this alternative is approximately 30 years. The viaduct would have to be replaced if it collapses during a major earthquake or the ASR deterioration renders it unsafe.	• Would have a beneficial effect because Alternative 3 would replace the existing severely damaged viaduct with a new viaduct that is designed to meet current seismic safety standards required by Caltrans. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Paleontology	None	• No previously recorded paleontological sites were identified during the records search; however, there is the potential to uncover fossil remains as a result of earth-moving activities.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.
Hazardous Waste/Materials	None	• Based on the results of a site investigation conducted along the existing viaduct corridor, soil and groundwater at the project site have the potential to be contaminated with volatile organic compounds (VOCs) and petroleum hydrocarbons; this could impact workers and the environment. • Bridge elements and buildings to be demolished may have asbestos-containing materials (ACM) in the form of coatings, insulation, and/or expansion joint compounds and lead-based paint (LBP) coatings, which could cause health effects to workers. • Costs associated with hazardous waste remediation and disposal under Retrofit Alternative are estimated at $6 million.	• Based on the results of a site investigation conducted along the existing viaduct corridor, soil and groundwater at the project site have the potential to be contaminated with VOCs and petroleum hydrocarbons; this could impact workers and the environment. • Bridge elements and buildings to be demolished may have ACM in the form of coatings, insulation, and/or expansion joint compounds and LBP coatings, which could cause health effects to workers. • Soils near US 101 may contain aerially deposited lead (ADL) generated by motor vehicle exhaust, which could cause health effects to workers. • Costs associated with hazardous waste remediation and disposal under Alternative 3 are estimated at $4.7 million. • Impact level would be the same for any bridge concept.	Same as Alternative 3A.	Same as Alternative 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Air Quality	None	• Under the worst-case day of the construction period (i.e., viaduct closed and traffic detour in effect), the regional emissions of nitrogen oxides (NO_x) would exceed the daily significance threshold set forth by South Coast Air Quality Management District (SCAQMD).	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2 .
Noise and Vibration	None	• Noise from construction activities would be confined to a relatively narrow corridor extending along both sides of the roadway and corresponding to the construction sequence. Noise levels from construction activities at the nearest noise-sensitive receptors are predicted to be well below the City's limit of 75 A-weighted decibels (dBA). Minimal construction noise impacts are expected to occur. • During construction, the highest vibration levels would be caused by the impact pile driver. Buildings located adjacent to the pile driving location could temporarily experience the vibration effect. Since no fragile buildings or historic buildings are located within 50 ft of the proposed construction site, no adverse impacts from construction vibration to adjacent buildings are expected to occur.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 2.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Biological Resources	None	• Limited biological resources exist within the viaduct footprint where construction activities would occur. No mature trees would be removed; hence, no adverse impacts to plant species are anticipated. Cliff swallows or roosting bats may establish new nests or roosts under the viaduct deck. A preconstruction survey would be conducted to confirm the absence or presence of any nesting birds or roosting bats. If found, steps would be taken to remove them and prevent establishment of new nests or roosts prior to the beginning of the nesting season.	• Ornamental trees within the survey area have a limited potential to support nesting birds, which are protected by the Migratory Bird Treaty Act. A preconstruction survey would be conducted to identify any mature trees subject to removal prior to the commencement of construction activities. Cliff swallows and roosting bats may establish new nests under the viaduct deck. A preconstruction survey would be conducted to confirm the absence or presence of any nesting birds or roosting bats. If found, steps would be taken to remove them and prevent establishment of new nests or roosts prior to the beginning of the nesting season. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.
Cumulative Effect: Air Quality	None	• Cumulative air pollutant emissions could occur if several projects within the locality of the viaduct are under construction at the same time during the 2.5-year construction duration.	• Cumulative air pollutant emissions could occur because there are foreseeable projects scheduled to be constructed in nearby vicinity during the same period as the proposed project. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.
Cumulative Effect: Land Use	None	• No substantial cumulative effect with current land use policy. • Would potentially be in conflict with future High-Speed Rail Project and the Westside Subway Extension Project.	• More business relocation could occur within the vicinity of the proposed project because there are foreseeable projects proposed to be constructed within the same locality of the proposed project.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Cumulative Effect: Community Impacts	None	• No substantial cumulative effect on community impacts and environmental justice.	• Cumulative community impacts could occur to area residents because there are foreseeable projects scheduled to be constructed in the nearby vicinity during the same period as the proposed project. • Impact level would be the same for any bridge concept.	Same as Alignment 3A.	Same as Alignment 3A.
Cumulative Effect: Cultural Resources	None	• None	• The 6th Street Viaduct is designated City of Los Angeles HCM #905, as one of 11 historic Los Angeles River bridges (HCM #900 – #910). According to the city Office of Historic Resources (OHR), the themes that these monumental river bridges convey include the City Beautiful Movement, relation to the City Municipal Art Commission, and engineering and technical innovations; furthermore, the 6th Street Viaduct is transitionally important in that it established the streamline moderne/art deco design principles of some of the city's Works Progress Administration (WPA) bridges beginning in the mid 1930s. The 6th Street Viaduct contributes to these themes, and its removal would impact the City's historic-cultural monument bridges on a cumulative basis.	Same as Alignment 3A.	Same as Alignment 3A.

Table 2. Summary of Environmental Evaluation

Area of Impact	Alternative 1 No Action	Alternative 2 Retrofit	Alternative 3 Alignment 3A	Alternative 3 Alignment 3B	Alternative 3 Alignment 3C
Cumulative Effect: Traffic and Circulation	None	• Cumulative traffic impacts could occur during the 2.5-year project construction if other projects within the same locality are scheduled for construction during the same timeframe and utilize the same hauling routes.	Cumulative traffic impacts would be larger than Alternative 2 due to the required closure of the 6th Street Viaduct during the 4-year construction period.	Same as Alignment 3A.	Same as Alignment 3A.
Section 4(f) Resources	None	• Would have a permanent, adverse impact on historic 6th Street Viaduct.	• Would have a permanent, adverse impact on historic 6th Street Viaduct.	Same as Alignment 3A.	Same as Alignment 3A.

5. Avoidance, Minimization, and Mitigation Measures

The proposed project alternatives have been designed to avoid or minimize potential environmental impacts. Mitigation measures are proposed when avoidance and minimization attempts could not fully resolve the impacts. Several measures outlined in this document are the requirements of applicable laws, regulations, ordinances, and formally adopted City standards (e.g., Los Angeles Municipal Code and Bureau of Engineering Standard Plans), which govern the City and its contractors. Moreover, many measures are part of the requirements of the uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., Standard Specifications for Public Works Construction and the Work Area Traffic Control Handbook) (WATCH Manual) as specifically adapted by the City of Los Angeles (e.g., The City of Los Angeles Department of Public Works Additions and Amendments to the Standard Specifications For Public Works Construction [aka "The Brown Book," formerly Standard Plan S-610]).

Table 3 summarizes proposed specific mitigation measures to minimize impacts with implementation of Alternatives 2 and 3.

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
Community Impacts and Environmental Justice	• Develop a construction staging plan and Traffic Management Plan (TMP) in close coordination with the members of the Downtown Construction Traffic Management Committee and with agencies or developers responsible for other planned projects in the immediate vicinity of the proposed project to minimize direct and cumulative construction impacts on the community. The TMP shall also identify and provide alternate traffic detour routes, construction materials hauling routes, bus stops, transit routes and operation hours, pedestrian routes, and residential and commercial access routes to be used during the construction period. • Inform key event organizers in the Boyle Heights and Downtown Arts District communities of the construction schedule to avoid conflict on the use of areas near the 6th Street Viaduct for any festive events. • If homeless people were found within the construction site, the Los Angeles Homeless Services Authority (LAHSA) will be contacted to provide services to any homeless people found within the project area prior to construction.	• Conduct a public outreach program to keep residents, businesses, utility service providers, emergency service providers (including Fire and Police Departments) within the project area informed of the project construction schedule, demolition plan, material hauling plan, relocation plans and assistance programs, traffic-impacted areas, and the TMP and other relevant project information. • Require the construction contractor to submit the means and methods for demolition for City of Los Angeles Bureau of Engineering (LABOE) review and approval. During the demolition period, construction inspectors shall ensure the contractors adhere to the approved plan. • Participate in ongoing meetings with the LABOE Los Angeles River Project Office (LARPO) to implement elements of the Los Angeles River Revitalization Master Plan (LARRMP) related to Greening Concept objectives to improve the area near the 6th Street Viaduct and provide potential future connections to the river corridor from the viaduct. In addition to LARPO, meetings will include, but are not limited to, the Planning Department, the Recreation and Parks Department, and the Community Redevelopment Agency.

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
		• Provide improvements to enhance the aesthetics and pedestrian safety of 11 affected intersections along the proposed detour routes. Types of improvements will be developed with public input and may include, but not be limited to, the following: decorative crosswalk with community theme; raised median with hardscape treatment where space allows; and larger corner cuts to allow improved truck turning radius. • Develop a construction staging plan and TMP in close coordination with members of the Downtown Construction Traffic Management Committee and with agencies or developers responsible for other planned projects in the immediate vicinity of the proposed project to minimize direct and cumulative construction impacts on the community. The TMP shall also identify and provide alternate traffic detour routes, construction materials hauling routes, bus stops, transit routes and operation hours, pedestrian and bicycle routes, and residential and commercial access routes to be used during the construction period. • Inform key event organizers in the Boyle Heights and Downtown Arts District communities of the construction schedule to avoid conflict on the use of areas near 6th Street Viaduct for any festive events. • If homeless people were found within the construction site, the LAHSA will be contacted to provide services to any homeless people found within the project area prior to construction.
Utilities and Emergency Services	• Notify emergency service providers at least 2 weeks in advance of the project construction schedule. Provide detailed information on the construction schedule, roadway closures, traffic detour route maps, and expected congested intersections. • Coordinate with emergency service providers throughout the construction period to notify them of any changes in construction schedule, roadway closures, and detour routes.	• Conduct a public outreach program to keep residents, businesses, utility service providers, emergency service providers (including Fire and Police Departments) within the project area informed of the project construction schedule, demolition plan, material hauling plan, relocation plans and assistance programs, traffic-impacted areas, and the TMP and other relevant project information.
Traffic, Transportation and Pedestrian Facilities	No mitigation is required.	• Require the construction contractor to install new traffic signals at the intersection of 4th Street and US 101 Southbound On- and Off-Ramps, and connect to Los Angeles City Automated Traffic Surveillance and Control (ATSAC) System. • Require the construction contractor to restripe to add an eastbound right-turn lane at the intersection of 4th Street and Soto Street.
Aesthetics and Visual Resources	No mitigation is required.	• Establish an Aesthetics Advisory Committee (AAC) to provide input and advice on bridge aesthetics for the new structure during the final design stage of the project. The AAC will

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
		participate in design review meetings and provide input on selected design elements including, but not limited to, colors, textures, lighting, railings, and community/City gateway monumental elements. • Participate in ongoing meetings with the LABOE and LARPO to implement elements of the LARRMP related to Greening Concept objectives to improve the area near the 6th Street Viaduct and provide potential future connections to the river corridor from the viaduct. In addition to LARPO, meetings will include, but are not limited to, the Planning Department, the Recreation and Parks Department, and the Community Redevelopment Agency.
Cultural/ Historical Resources	• Incorporate all applicable Secretary of Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68) into the design of retrofitting components. • Prior to any viaduct alteration or construction activities, contact the National Park Service Western Region Office (NPS) in Oakland, California, to determine the degree of additional recordation required for the property beyond that provided in 1996 (Historic American Engineering Record [HAER] No. CA-176). Unless otherwise agreed to by the NPS Historic American Buildings Survey (HABS)/HAER, Caltrans and the City shall ensure that all documentation is completed and accepted by HABS/HAER before the viaduct is altered or demolished. • Install two new freestanding informative permanent metal plaques or signage at both ends of the bridge at public locations that provide a brief history of the bridge, its engineering features and characteristics, and the reasons it was replaced. • Establish an Environmentally Sensitive Area (ESA) Action Plan, which will include fencing of Site No. 19-003683, archaeological and Native American monitoring during ground-disturbing activities, and training of construction workers.	• Prior to the start of any work that could adversely affect any characteristics that qualify the 6th Street Viaduct (Bridge No. 53C-1880 and 53-0595) as a historic property, contact the NPS in Oakland, California, to determine if additional recordation is required for the historic property beyond that provided in "Historic American Engineering Record, 6th Street Bridge, HAER No. CA-176," dated May 7, 1996. The City shall provide NPS 30 calendar days to respond to their additional recordation determination request. If additional documentation is required, the City shall ensure that the additional documentation is completed and accepted by NPS before the viaduct is altered and/or demolished. The City shall prepare draft and final reports to be reviewed by NPS. • Upon completion, copies of the documentation prescribed in the above measure, consisting of an acid-free xerographic copy of the report, prepared on standard 8.5-inch by 11-inch paper, shall be retained by Caltrans District 7, deposited in the Caltrans Transportation History Library in Sacramento, and offered by the City to, at a minimum, the Los Angeles Public Library, Los Angeles Conservancy, Los Angeles City Historical Society, Historical Society of Southern California, City of Los Angeles Office of Historical Resources, and the California Office of Historic Preservation. • Work with the Los Angeles Public Library to place the historical information from the HABS/HAER report on a City Web site with a link to a public library Web site, such as the Los Angeles Public Library Web site, available to the public for a minimum period of 3 years. The information link will also be made available to the Caltrans Transportation Library and History Center at Caltrans Headquarters in Sacramento for inclusion on their Web site. • Produce a documentary (motion picture or video) that addresses the history of the Los Angeles River Monument bridges, and their importance

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
		and use within the broader contextual history of the City of Los Angeles. The motion picture or video shall be of broadcast quality, between 30- and 90-minute duration, and shall be made available to local broadcast stations, public access channels in the local cable systems, and requesting schools/libraries; one copy shall be submitted to the Caltrans Transportation Library and History Center at Caltrans Headquarters in Sacramento. • Produce and publish a booklet on the Historic Los Angeles River Bridges that addresses the history of the monumental concrete bridges of Los Angeles and this bridge's place in that history. The booklet shall be similar in general format to the "Historic Highway Bridges of California" published by Caltrans (1991) and shall include high-quality black-and-white images of the Los Angeles River Bridges, historic photographs or drawings, as appropriate, and text describing each of the bridges' location, year built, builder, bridge type, significant character-defining features, and its historic significance. City shall post an electronic version of the booklet on a City Web site and produce paper copies for distribution to local libraries, institutions, and historical societies. One copy shall be submitted to the Caltrans Transportation Library and History Center in Sacramento. City shall maintain the camera-ready master booklet and produce additional copies if there is demand. • Install two new freestanding informative permanent metal plaques or signage at both ends of the bridge at public locations that provide a brief history of the bridge, its engineering features and characteristics, and the reasons it was replaced. • Offer artifacts removed from the viaduct during demolition to local museums or other suitable facilities to be determined by the City. The accepting institutions shall arrange their own transportation to deliver the artifacts to designated locations. • Establish an ESA Action Plan, which will include fencing of Site No. 19-003683, archaeological and Native American monitoring during ground-disturbing activities, and training of construction workers.
Paleontology	• Retain a qualified paleontologist to develop and implement a Paleontological Mitigation Plan. Conduct paleontological monitoring onsite to inspect new exposures created by earth-moving activities in areas underlain by the older alluvium and at depths greater than 5 ft below current grade for the younger alluvium.	Same as Alternative 2.

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
Air Quality	• Implement fugitive dust source controls by requiring the contractor to: – Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to active and inactive sites during workdays, weekends, holidays, and windy conditions. – Install wind fencing and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions. • Implement mobile and stationary source controls by requiring the contractor to: – Reduce use, trips, and unnecessary idling from heavy equipment. – Maintain and tune engines per manufacturer's specifications to perform at U.S. Environmental Protection Agency (EPA) certification levels, where applicable, and at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. – Prohibit any tampering with engines and adhere to manufacturer's recommendation. – Lease new and clean equipment meeting the most stringent of applicable federal and state standards, if practicable. – Utilize EPA-registered particulate traps and other appropriate controls, where suitable, to reduce emissions of particulate matter and other pollutants at the construction site.	Same as Alternative 2.

Table 3. Proposed Specific Mitigation Measures

Environmental Factor	Mitigation Measures	
	Alternative 2 – Retrofit	Alternative 3 – Replacement
Air Quality	• Implement administrative controls by requiring its staff to: – Identify where implementation of mitigation measures is rejected based on economic infeasibility. – Require the contractor to prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) – Where appropriate, use alternative fuels such as natural gas and electric. – Develop a construction traffic and parking management plan that minimizes interference and maintains traffic flow as part of the TMP.	Same as Alternative 2.
Biological Resources	• If construction occurs between February 1 and August 31, conduct a preconstruction survey by a qualified biologist to identify any active nesting or roosting locations. If active nests of migratory species occur within the construction area, then a temporary exclusion fence 50 ft in diameter shall be assembled around the nest. The biologist shall then monitor the site of active nests during the construction activities. Once the biologist determines that chicks have fledged or parents have abandoned the nest, the temporary fence can be removed and construction in such areas can proceed.	• Prevent possible damage and injury to migratory birds by scheduling the removal of vegetation (whether native or horticultural landscaping) in the project area between September 1 and January 31. If initial vegetation removal and ground clearance cannot be avoided between February 1 and August 31, a qualified biologist shall conduct a preconstruction survey of trees and shrubbery for active nests. If active nests of migratory species occur within the construction area, then a temporary exclusion fence 50 ft in diameter shall be assembled around the nest. The biologist shall then monitor the site of active nests during the construction activities. Once the biologist determines that chicks have fledged or parents have abandoned the nest, the temporary fence can be removed and construction in such areas can proceed.
Cumulative Effects	With implementation of the proposed mitigation measures under each individual resource; no additional mitigation measures would be required.	With implementation of the proposed mitigation measures under each individual resource; no additional mitigation measures would be required.

6. Areas of Controversy

Under both build alternatives for this project, the proposed undertaking would have an adverse effect on the 6th Street Viaduct pursuant to provisions of the National Historic Preservation Act (NHPA). Alternative 2 – Retrofit proposes work that would alter the character-defining features of the viaduct, potentially making the property ineligible for inclusion in the National Register of Historic Places (NRHP) by compromising the integrity of the historic structure. Alternative 3 proposes to replace the existing viaduct with the new structure, resulting in removal of the historic structure. The 6th Street Viaduct is 1 of 12 historically significant bridges/viaducts that cross the Los Angeles River and are considered important both for their distinctive architecture and for the critical role they played in the development of Los Angeles as a world-class city. The 6th Street Viaduct is also a visual landmark that links the communities of Boyle Heights and Downtown Los Angeles. City preservationists are concerned about the loss of the historic viaduct, and citizens of both communities have expressed concern at public meetings about the importance of this landmark to the community and how modifications to the structure or its removal could have an adverse effect on community values.

In public and agency meetings held during project development, support was expressed for opportunities created by viaduct replacement to redevelop the area surrounding the 6th Street Viaduct. This was viewed as an opportunity to enhance the quality of life of those living in the local community and the region. Examples of redevelopment and land use opportunities include adding more recreational area adjacent to the new viaduct; making the viaduct a landmark destination; development of retail and gallery space under the viaduct; provision of river access; and making the area around the viaduct a defensible space to facilitate the elimination of crime and homeless occupation. While these opportunities are compatible with the objectives and plans of the LARRMP, redevelopment of this land for nonindustrial uses would be inconsistent with local community plans that aim to preserve the industrial land uses and protect employment within the community plan area.

Another area of public debate that arose during project meetings has been the wide-ranging preferences for replacement bridge types to be constructed for the main span over the Los Angeles River. Five bridge types have been evaluated by the PDT, bridge experts, and the general public. The replacement bridge types considered include a replication of the existing viaduct, variations of a contemporary arch structure, and ultra-modern "extradosed" (cable-supported) structures.

7. Preferred Alternative Identification

After comparing and weighing the benefits and impacts of all of the feasible alternatives, as summarized in Table 1 and described in detail in the EIR/EIS, the PDT has identified the Replacement Alternative (Alternative 3) with Alignment 3B and the principle of Bridge Concept 4 as the Preferred Alternative for the 6th Street Viaduct Seismic Improvement Project. The City and Caltrans have made the final determination of the project's impact on the environment based on the comments and concerns expressed during the public review period and the results of the engineering and environmental technical analysis. The Preferred Alternative would attain the purpose of the project.

Although the Retrofit Alternative (Alternative 2) would have lower construction costs and would preserve some historic elements of the viaduct compared to the Replacement Alternative, it would not be able to stop, reverse, or mitigate the ASR deterioration and, consequently, would have the highest life-cycle cost. The Retrofit Alternative would only meet a "no collapse" standard; significant damage could occur in a major earthquake. In addition, it would not correct the geometric deficiencies of the existing viaduct and would still adversely affect this historic resource. The Retrofit Alternative would partly achieve the project's purpose; however, due to the deficiencies described above, it is inferior to the Replacement Alternative. The PDT determination was presented in the Draft EIR/EIS, and after consideration of public comments on the Draft EIR/EIS, the Retrofit Alternative remains not recommended.

To identify a preferred alternative based on the highest ranked replacement alignment and bridge concept, specific criteria were used to evaluate the different bridge structures and alignment alternatives. Seismic performance, geometric flexibility, roadway and pedestrian safety, historical compatibility, public support, environmental impacts, construction cost, and constructability were among the set of criteria used for the evaluation of the bridge concepts. The criteria for the evaluation of alignments consisted of, but were not limited to, such factors as operational safety, ROW impacts to properties, construction schedule, and industrial preservation. Alignment 3B and Bridge Concept 4A received the highest score. As a result, after careful consideration of all the aforementioned concerns, and in further consideration of all other environmental analyses contained in the EIR/EIS, the Replacement Alternative with Alignment 3B and the principle of Bridge Concept 4 was selected as the Preferred Alternative.

8. Public and Agency Involvement

The CEQ NEPA Regulations (40 CFR Part 1500 *et seq.*) and the State CEQA Guidelines (14 CCR, Sections 15082-15083) recommend that federal, state, and local lead agencies use a public scoping process to help identify the various issues to be addressed in the environmental document. Scoping allows public agencies and the general public to learn about the proposed

project and to provide input regarding alternatives, environmental impacts, and mitigation measures to be evaluated.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (23 U.S.C. §139), authorizing U.S. highway and transit programs, has provisions intended to improve the environmental review process for transportation projects. One of the key requirements of SAFETEA-LU related to public involvement is that the lead agency must provide the "opportunity for involvement" to participating agencies and the public in developing the purpose and need and the range of alternatives to be considered for a proposed project.

Public involvement, agency coordination, and Native American tribal coordination were carried out during the project development process by means of formal scoping meetings, a community advisory committee (CAC), participating agency coordination meetings, stakeholder meetings, potentially affected property owner meetings, political representative meetings, notification letters, and the creation and maintenance of a project Web site.

Ongoing coordination meetings with affected business owners and groups, government agencies, railroads, and utility companies have been conducted to update interested parties on the status of the proposed project, obtain input from public and agency, and resolve issues. Letters describing the proposed project and inviting comment were sent to Native American groups and other individuals known to have an interest in the proposed project.

8.1 Initial Project Information Meetings

In October 2006, prior to commencement of the formal environmental review process, the PDT initiated widespread notification of government agencies and the public about proposed project information meetings. Notices were mailed to interested agencies and residents within a 2,000-ft radius of the viaduct; published in newspapers (the *Los Angeles Times* and *La Opinion*); and hand-delivered to residents and property owners in the immediate vicinity of the viaduct. Two project information meetings were held – one on January 23, 2007, at the Artshare Los Angeles (west side of the Los Angeles River) and one on January 25, 2007, at St. Isabel Church (east side of the Los Angeles River). Approximately 80 people attended the meetings, listened to a project information presentation, asked questions, and provided suggestions.

Numerous other project information meetings were conducted upon request. These meetings included the Boyle Heights Neighborhood Council (BHNC) Land Use Committee (February 13, 2007), the BHNC Quadrant 4 (March 12, 2007), the Downtown Los Angeles Neighborhood Council (March 13, 2007), the BHNC Quadrant 3 (May 9, 2007), the Boyle Heights Resident Homeowner Association (May 19, 2007), the Downtown Arts District Business Improvement District (October 3, 2007), Los Angeles Conservancy (October 29, 2007), and the American Institute of Architects (April 23, 2008).

8.2 Community Advisory Committee Formation

Following the proposed project information meetings, a CAC was formed. Twenty-five (25) members were identified by the PDT based on their representation of affected neighborhoods, businesses, and various other stakeholders, and their willingness to serve as conduits between the project design team and their constituents. The CAC meetings began on March 29, 2007, and as of June 2011, the PDT has conducted 10 CAC meetings. The overall goals of the meetings are sharing project information, soliciting comments and input, and updating the members on the progress of project development.

8.3 Scoping Process

The scoping process was initiated by widespread notification of government agencies and the public via publication of a Notice of Intent (NOI) and a Notice of Preparation (NOP) announcing initiation of the EIR/EIS. The NOI was published in the *Federal Register* (Volume 72, Number 169) on August 31, 2007, in accordance with NEPA. The NOP was posted on the City of Los Angeles Web site[5], the project's public Web site[6], and with the Los Angeles County Clerk in accordance with CEQA. Other notification activities included placement of public notices in newspapers of general circulation; mailing the NOP to potentially affected government agencies, residents, and businesses; and translation of public documents from English to Spanish. Other project information was also posted on the City and public Web sites for public viewing.

Two separate scoping meetings were held on August 24, 2007. The meetings took place at the Artshare Los Angeles, located at 326 S. Hewitt Street in Los Angeles on the west side of the Los Angeles River. Another scoping meeting was held on August 26, 2007, at the Boyle Heights Youth Technology Center, located at 1600 E. 4th Street on the east side of the river within the Boyle Heights community.

8.4 Participating Agency Coordination

Section 6002 of SAFETEA-LU requires that all transportation projects requiring an EIS, for which the original NOI was published in the *Federal Register* after August 10, 2005, must have a plan established for coordinating public and agency participation and comment during the environmental review process. It is the responsibility of the lead agencies to develop the coordination plan to facilitate and document the interaction between the lead agencies and participating and cooperating agencies and the public.

As of July 1, 2007, Caltrans assumed FHWA's authority and responsibility for compliance with NEPA and other environmental laws. The Memorandum of Understanding (MOU) between FHWA

[5] http://eng.lacity.org/techdocs/emg/Environmental_Review_Documents.htm
[6] http://www.la6thstreetviaduct.org/TheProject/_documents/NOP_Public.pdf

and Caltrans concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program allows Caltrans to serve as the federal lead agency on this project.

As part of the scoping process and in accordance with the Section 6002 requirement, Caltrans prepared a Coordination Plan for this proposed project. Fifteen (15) agencies were invited to be a participating agency. The following agencies accepted the invitation: City of Los Angeles Department of Recreation and Parks, Los Angeles County Metropolitan Transportation Authority, and Southern California Regional Rail Authority [Metrolink]. Three coordinating meetings were held during the scoping process.

8.5 Other Stakeholder Meetings

A series of meetings with affected property owners, community groups, interested agencies, and City interdepartmental staff was carried out throughout the project development period (2007-2009). At every meeting, representatives from the City of Los Angeles Department of Public Works Bureau of Engineering, Bridge Improvement Program, Caltrans, and the project consultant team presented project information and answered questions from the stakeholders. More than 30 stakeholder meetings were held as of the end of 2010.

8.6 Business Survey

A business survey was conducted to acquire information from businesses located within the vicinity of the project construction limits. The survey profiled business operations and identified issues and concerns. More than 100 survey questionnaires were distributed to local businesses within the project area. All affected businesses (40) were interviewed by the outreach team. The information collected was evaluated to determine the potential effects on businesses as a result of project implementation.

8.7 Public Review of Draft EIR/EIS

The Draft EIR/EIS was circulated for public review and comment between June 16, 2009, and August 24, 2009. The Notice of Availability (NOA) was published in the *Los Angeles Times* on June 11, 2009, and it was filed with the County Clerk on June 18, 2009, and the *Federal Register* on July 10, 2009 (Volume 73, Number 131 *EIS No. 20090226)*. Three public hearings were conducted. During the 70-day public review period ending August 24, 2009, 26 written comment letters and e-mails pertaining to the Draft EIR/EIS were received. One additional comment was received in July 2010.

Verbal comments made by the public during the public hearings are summarized in table 4. The Transcripts of Public Hearing are kept on file at the City of Los Angeles Bureau of Engineering Bridge Improvement Program and the Caltrans District 7 Office. Written comments received on the

Draft EIR/EIS are summarized in Table 5. Responses to all written comments received are provided in the Final EIR/EIS.

Table 4. Comments/Questions and Responses Provided at the Public Hearings

Name	Comment/Question	Response	Page No. of Transcript
Boyle Heights Senior Center, 2839 East 3rd Street, Los Angeles, July 14, 2009, 6:00 p.m. to 8:30 p.m.			
Art Geilman, Shalom and Sons	Will there be any tax consequence for any local businesses? Will there be any state or federal money for disruption of business?	No. Yes, state and federal money. Mostly federal money.	33
Unknown Commenter	What plan is there to protect businesses and buildings that are along the alignment during demolition? How much of the property are you going to use in order to accomplish that? Are you going to use the property alongside the bridge to bring it down? Are you going to take some of the property, or are they going to be affected in any way?	Many means and methods would be used by the demolition contractor, generally in the form of debris walls, monitoring, and pre-inspection. Typically, specifications are made with the contractor. For instance, monitoring devices are installed to measure the vibration to determine the degrees of movement. Physical surveys of existing buildings to document their condition before, during, and after the start of demolition are also conducted. Screen walls may also be erected between existing buildings and the project. When the bridge is brought down vertically, then crews have to remove the debris and will be using local roads. Or, depending on the contractor, the bridge will be brought down in pieces, staying within the footprint of the existing bridge. Eventually the contractor will have to get outside that footprint to remove the bridge.	34
Rafael (no last name or residence given)	How will the bridge be taken down with bringing it down on our building, which is situated partly under the bridge, or blocking our access?	A vertical wall would be built between your building and the bridge. Your access is currently through City right-of-way underneath the bridge, so to address your concerns for access, we'd need to look at your lease agreement with the City.	36
Geilman (no last name given)	We wouldn't be able to access the building with forklifts and trucks if you're putting a wall there.	Currently, if you have access from underneath the bridge into your building, that access is through City right-of-way, and so we would have to look at the lease agreement that you currently have with the City in leasing their property to get access that's not on a public road.	38
Rosalie Guroa, Boyle Heights Resident	Whatever the final design of the bridge, I'd like it to be closer to the original, which is a landmark in our community. When the bridge is closed, it will have major impacts to my community, especially traffic on 4th Street. How are you addressing that?	The EIR is looking deeply into that issue. Traffic was modeled for the streets that traffic would be diverted to. We did traffic modeling of the streets that the traffic would be diverted to, like 4th Street, 7th Street, Soto, Boyle, and on the other side, Alameda, Central. We have traffic growing forecasts, and we have come up with measures to make it better, but it won't be perfect. We won't try to gloss over the fact that there will be impacts because there are 13,000 cars that we have to move off that bridge for about four years, so we're going to do our utmost with good design and planning and working with our partner agencies to make the affected intersections and streets run as smoothly as possible.	39
Arturo Vera, Boyle Heights Resident and	What will happen to the final bridge design if there's not sufficient	This project competes with other projects throughout the state of California and even at the federal level. Currently, the City is working on a financial plan to	42

Table 4. Comments/Questions and Responses Provided at the Public Hearings

Name	Comment/Question	Response	Page No. of Transcript
member of the Boyle Heights Homeowners Association	money?	figure out how to finance the project over a number of years. Financing is a key issue for the project.	
Victoria Torres, Boyle Heights Historical Society	Concerned over the speed limit on the widened and straightened bridge.	The speed limit on the bridge is not expected to be changed.	44
Carol Armstrong, City of LA River Project Office	Would like to see the project as a retrofit; if a new bridge is required, incorporate "riverly" elements. It is important that the high-speed rail and its future impacts be considered with this project.	The comment is acknowledged by the moderator.	45
Joaquin Castellanos, Boyle Heights Resident	The cable bridge looks beautiful, but there are already too many cables in the area. Prefers the bridge design to reflect the history of the community.	The comment is acknowledged by the moderator.	45
Jim Zant, Cal Hono Freight	Cal Hono Freight subleases a property that might be affected by the demolition of the bridge. The gate for the truck maneuvering area is adjacent to the pylons.	If the loading docks or travel/maneuvering area is underneath the bridge, that land is currently City right-of-way.	46
Mike Bueller, Los Angeles Conservancy	Regarding bridge design Alternative 1A, is it described somewhere, because it isn't included in the EIR? What are that alternative's differences other than additional columns in the railroad right-of-way? Why are right-of-way costs higher for the replication alternative? Can we assume that those parcels/ buildings designated for acquisition would be demolished?	The full replica abutment is not documented in the Draft EIR/EIS. It will all be documented in the Final EIR/EIS. The alternative has differences in construction and higher right-of-way costs/impacts. The bridge is wider and has more columns/footings. They would be demolished and businesses relocated.	46
Paul Habib, From Councilman Jose Huizar's Office	If Alternative 3B is the preferred alignment, it would cost a hundred million more and it affects the most amount of properties. Why was that selected as opposed to 3A or another one with a little less impact?	The PDT is looking into modifying Alignment 3B in an effort to minimize overall right-of-way takes.	51
Miguel Afaro, Boyle Heights Resident and Resurrection Church member	He and members of Resurrection Church prefer the futuristic look of the bridge. Some of the designs have big walls that will attract graffiti. Also the lighting and pylons in the middle of the street are a hazard.	The comment is acknowledged by the moderator.	51
Martha Cisneros, Boyle Heights Resident	In favor of the replica bridge and opposes all other bridges due to the fact that we are a historic area.	The comment is acknowledged by the moderator.	51
Gilman (No	Will there be any state or federal	Yes, mostly federal money	52

Table 4. Comments/Questions and Responses Provided at the Public Hearings

Name	Comment/Question	Response	Page No. of Transcript
last name given)	money for disruption of businesses.		
Inner City Arts Building, 720 Kohler Street, Los Angeles, July 21, 2009, 5:00 p.m. to 7:00 p.m.			
Alana Linn, Little Tokyo Resident	Would like future public hearings to be in public libraries or schools that are more accessible on bike. Would like the public hearings videotaped and available on the Internet. Believes a short break between presentation and question/answer sessions would be useful.	The comment is acknowledged by the moderator.	29
John McShane, Silver Seed Company	Silver Seed Company was not surveyed for the project.	Silver Seed Company was surveyed. (The survey of affected property owners was performed in September 2007. The survey team received the response to the questionnaire back from Silver Seed Company. The information from the survey form was summarized in Table 3.4-2).	34
Paul Habib, From Councilman Jose Huizar's Office	If Alternative 3B is the preferred alignment, it would cost a hundred million more and it affects the most amount of properties. Why was that selected as opposed to 3A or another one with a little less impact?	The PDT is looking into modifying Alignment 3B in an effort to minimize overall right-of-way takes. The design of the bridge is only 5 to 10% complete, so another 90% of design work still needs to be done. (Note, Mr. Habib also attended the July 14 meeting and would like to make the same comment for record).	36
Estelia Lopez, Arts District BID	What is the radius that you are using for the outreach to the business owners around the impact zone? What is the impact zone on this side of the bridge? Concern is for the emerging live/work units in old industrial buildings that are not readily visible from the street.	A 2,000-foot radius around the bridge was used for mailing notices for this public hearing. At the start of the project, the community outreach and business outreach consultants canvassed the project area and have compiled a detailed database of inhabited and uninhabited businesses.	38
Jim Bickley, Spilo Worldwide	How will the modified 3B alternative affect properties on the northwest side of the bridge? So where is the reduction in right-of-way costs?	The alignment on the west side remains the same, so it's really no change to that area. The major change is along the south side.	41
Alana Linn, Little Tokyo Resident	The bridge and project could represent not only earthquake preparedness but green initiatives. It would be a very tangible way of presenting these important issues for all of Los Angeles.	The comment is acknowledged by the moderator.	42
Tiffany Sum, Downtown Resident	The LA River Revitalization Initiative is aligning with this project and may be aligned with cultural activities or interest with the development of the City.	The comment is acknowledged by the moderator.	43

Table 5. Summary of Written Comments Received on Draft EIR/EIS

Letter No.	Name	Date Received	Issues
1	Community Redevelopment Agency of the City of Los Angeles (CRA/LA)	June 4, 2008	• Inconsistent with the preservation of industrial land uses • Creation of extensive open space/recreational areas is not an appropriate use of land • Inconsistent with several Project Area Redevelopment Plan objectives • Impacts to transportation
2	Hill, Farrer & Burrill LLP (representing Spilo Worldwide)	June 29, 2009	• Concerns over acquisition of property • Impacts to access • Construction noise and dust
3	Federal Emergency Management Agency (FEMA)	July 13, 2009	• Comply with the Flood Insurance Rate Maps requirements • Comply with the National Flood Insurance Program requirements
4	Martha Cisneros	July 14, 2009	• In support of Alternative 1A and opposed to all others
5	Juaquin Castellanos	July 14, 2009	• In support of Alternative 1A
6	Victoria Torres	July 14, 2009	• In support of Alternative 1A
7	Kevin Break	July 14, 2009	• Ensure bridge is "pigeon-proof" • Provide outlets for 120/220/480 voltage to accommodate filming at the bridge
8	Art Herrera	July 14, 2009	• In support of Alternative 4A
9	Tiffany Sum	July 14, 2009	• In support of Alternative 4A
10	John Fisher	July 14, 2009	• Incorporate original design elements of existing bridge in the new bridge, including the pyramid shape, art deco light standards, and flower design (pictures provided)
11	Cal Hono Freight	July 15, 2009	• Concerns over potential partial acquisition and construction staging areas
12	City of Los Angeles Cultural Heritage Commission	July 30, 2009	• Designation as Historic-Cultural Monument (HCM) not mentioned in Draft Environmental Impact Report (EIR) Executive Summary • Identify alternatives that will allow bridge to retain its HCM status • Provide full replication/reconstruction alternative • Reconsider artificial constraints guiding project alternative analysis • Provide an additional partial preservation alternative • Inadequate mitigation measures for Alternative 3-Replacement • Potentially inappropriate location for the retention and reuse of the bridge's original steel arches • Effects of the proposed alternatives on architectural elements not physically connected to the bridge but in close proximity • Cite guidelines for Historic Rehabilitation and Replacement by the American Association of State Highway and Transportation Officials • MM-4 and MM-15 imply Memorandum of Agreement (MOA) already executed • State Historic Preservation Officer's (SHPO) role unclear in concurrence with a finding of eligibility and with the Historic Property Survey Report (HPSR) • Clarify CAC support of full replication alternative • Draft EIR presented information inconsistent with Community Advisory Committee (CAC) meeting minutes • Incorrect contact information for Office of Historic Resources
13	City of Los Angeles Bureau of Street Lighting (BSL)	July 28, 2009	• Nighttime glare and light pollution • Clarify historic lighting replacement objectives and design standards

Table 5. Summary of Written Comments Received on Draft EIR/EIS

Letter No.	Name	Date Received	Issues
14	Glacier Cold Storage	July 29, 2009	• Concerns over potential partial acquisition and construction staging areas
15	County of Los Angeles Department of Public Works	August 6, 2009	• In support of project • Impacts to Los Angeles River Revitalization Master Plan (LARRMP) objectives • River pollutants
16	State of California Public Utilities Commission	August 13, 2009	• Design criteria must comply with Commission General Orders • Arrange meeting with the Rail Crossings Engineering Section of the Public Utilities Commission
17	Central City East Association	August 14, 2009	• Impacts to Arts District during construction • Hire business impact specialist to accommodate businesses during construction • Open/recreational space creation
18	Stover Seed Company	August 14, 2009	• Impacts to 6th Street frontage road would eliminate access and reduce parking • Public involvement initiated too late in environmental process
19	Hill, Farrar & Burrill LLP (representing Spilo Worldwide)	August 14, 2009	• Cumulative effects of related projects (high-speed rail) • Concerns over potential acquisition • Impacts to access during construction • Amend mitigation measures to allow for more notice time for relocation/acquisition (90 days is insufficient notice) • Document typos
20	Hager Pacific Properties	August 17, 2009	• In support of Bridge Concept 4 and Alignment 3B • Concerns over potential acquisition • Impacts to access and parking • Construction time frame
21	Friends of the Los Angeles River	August 17, 2009	• Community identity and cohesion • In support of bridge replacement that is appropriate, unique, and iconic (pictures provided) – further design analysis required • Stakeholder involvement • Address LARRMP goals
22	California Archives	August 19, 2009	• Misleading description of existing bridge design • Historic identity • In support of bridge restoration
23	United States Environmental Protection Agency (EPA)	August 24, 2009	• In support of Alternatives 2 and 3 • Expand upon cumulative impacts analysis • Historic and cultural resources • Environmental justice impacts • Aquatic resources impacts • Air quality/construction mitigation • Bike/pedestrian facilities
24	Department of Interior	September 3, 2009	• Executed MOA should be included in the Final EIR/EIS • Mitigation measures should be included in the MOA
25	Office of Planning and Research	September 18, 2009	• No comments were received from any state agency
26	Gabrieleno Band of Mission Indians	October 30, 2009	• Native American monitor should be onsite during excavation activity
27	CRA/LA	July 29, 2010	• Impacts to potential 500-600 Anderson Street Historic District

9. CEQA EIR Certification and NEPA EIS Record of Decision

The City, as the CEQA Lead Agency, has prepared a Final EIR. In accordance with CEQA, the City will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations (SOC) for impacts that could not be mitigated below a level of significance, and certify that the findings and SOC have been considered prior to project approval. The City will then file a Notice of Determination (NOD) with the State Clearinghouse that will identify whether the project will have significant impacts, mitigation measures included as conditions of project approval, findings made, and adoption of an SOC.

Similarly, Caltrans, as assigned by FHWA, has issued a Final EIS in accordance with NEPA, and will document and explain its decision regarding the selected alternative, project impacts, and mitigation measures in a Record of Decision (ROD) in accordance with NEPA.

10. Contact Information

To inquire about the proposed project or to obtain a copy of the CD-ROM containing the full text of the Final EIR/EIS, please contact:

Linda Moore
Environmental Manager, Bridge Improvement Program
Environmental Management Group
Bureau of Engineering, Department of Public Works
City of Los Angeles
1149 S. Broadway, Suite 600
Los Angeles, CA 90015
MS 939 (inter-office use only)
Tel: 213-485-5751
E-mail: linda.moore@lacity.org

or

Carlos Montez
Branch Chief
Caltrans District 7, Environmental Planning Department
100 S. Main Street
Los Angeles, CA 90012
Tel: (213) 897-9116
E-mail: carlos.montez@dot.ca.gov

REVISED 9/19/2011

ATTACHMENT SIX

SIXTH STREET VIADUCT IMPROVEMENT PROGRAM

Proposed Staffing Plan for Fiscal Year 2011 - 12

Bureau of Engineering

BOE will utilize two existing positions (Sr Structural Engineer PM II and Structural Engineer Associate III) for Project Approval and Environmental Doc Phase beginning FY 2011-12. For the Final Design Phase beginning after January 2012, one additional existing position (Structural Engineer Associate III) and the four new positions (Principal Civil Engineer PM III; Structural Engineer PM I; Management Analyst I and Sr Clerk Typist) will be assigned to the program pending approval and authorization of the four new positions.

1	9489-D	Principal Civil Engineer PM III	New
1	9425-C	Senior Structural Engineer PM II	Existing BIP
1	7956-B	Structural Engineer PM I	New
2	7957	Structural Engineer Associate III	Two Existing BIP - Currently ARRA positions
1	9184-2	Management Analyst II	New
1	1368	Senior Clerk Typist	New
7			**Three existing and four new resolution authorities Total for FY 2011 -12**

SEVEN TOTAL FOR FY 2011 - 12

Proposed Staffing Plan for Fiscal Year 2012-13 through 2017-18

1	9489-D	Principal Civil Engineer PM III	New FY 2011-12	
1	9425-C	Senior Structural Engineer PM II	Existing BIP	*begins in July 2011
1	7956-B	Structural Engineer PM I	New FY 2011-12	*begins in after Jan 2012
1	7956	Structural Engineer	New FY 2012-13	*begins in July 2012
2	7957	Structural Engineer Associate III	Existing BIP - ARRA positions	*One begins in July 2011, one in Jan 2012 : Both currently 2011/12 ARRA positions
1		Civil Engineer Associate III	Existing BIP - ARRA position	*Begins after July 2012: Currently 2011/12 ARRA position
1	7957	Structural Engineer Associate III	New FY 2011-12	*Begins after July 2012
1	9184-2	Management Analyst II	New FY 2011-12	*Begins after Jan 2012
1	1368	Senior Clerk Typist	New FY 2011-12	*Begins after Jan 2012
10			**Four existing and six new resolution authorities Total for FY 2012-12 thru 17-18**	

TEN TOTAL FOR FY 2011-12 THROUGH FY 2017-18

REVISED 9/19/2011

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10			**Four existing and six new resolution authorities Total for FY 2012-12 thru 17-18**	

TEN TOTAL FOR FY 2011-12 THROUGH FY 2017-18

Principal Civil Engineer PM III:

This position will be the Program Manager for the Sixth Street Viaduct Improvement Program. Responsibility will be the overall management and coordination of a $400 million project regarding scope identification and review, project budget, funding and schedule. This position will take primary responsibility for the overall coordination of the Project Approval and Environmental Document Phase, Final Design Phase, Right of Way Phase and Construction Phase.

The position will take the lead responsibility for the reviewing and updating all fund and grant requirements to meet the demands of any developing or evolving scope. This will include the role as the City's representative in all discussions and negotiations with the State and Federal agencies and representatives. Coordination and discussions with City governing bodies and other City agencies and departments will also be a primary responsibility of this position. The position will report to and make recommendations to the Seismic Governance Committee regarding status, funding, expenditures and any and all key issues.

Senior Structural Engineer PM II:

This position will take the role of the Design Manager. The position will manage consultant teams and City staff for obtaining the approval of the Final Environmental Document and the following Right of Way process and will take the leadership role of coordinating the Final Design. The Right-of-Way process will involve 32 parcels that will involve full-takes or parcel reconfiguration. The project scope for design phases including Right-of Way is $142 million.

If CMAR is approved as a delivery method this position will provide management of the development during the Final Design phase. This includes the development of the consultant RFP process including identification of scope and review evaluation criteria, contract negotiations and task order development. Coordination of all contract authorities will also be a priority. The position will manage the consulting team for both A/E design services and contingent upon adoption, the CMAR.

During the Final Design process, this position will have the key responsibility to oversee the design progress and will ensure that the key roles in the CMAR process are on schedule and meeting the scoping requirements of the design process.

As the project progresses to bid and award and construction, this position will take the lead in the role of Construction Manager for coordination of all construction activities with the General Contractor, subcontractors and other City departments and other entities.

Structural Engineer PM I:

This position will perform the role of Utility Manager. The Structural Engineer will take the lead for the overseeing the coordination and development of the utility plan for the project.

The position will coordinate all agencies and parties for the resolution of all utility challenges. Utilities will play a major role and cost factor to be addressed early in the Final Design phase and will follow through during construction. Addressing utilities early can mitigate many of the unforeseen utility and utility coordination costs that have plagued many other bridge projects. Cost impacts for lack of coordination and follow through of all utilities can impact both the project's budget and schedule. This is of particular concern in the river channel.

Early coordination in the design process and field conditions during construction will deal with issues of utility identification, location, relocation, reconfiguration for design around for all utilities including water, power, sewer, cable, fiber-optics, oil, gas, and telephone and other communications.

Structural Engineer:

This position will be responsible for the coordination of all rail right-of-way, project access and rail operation issues. The Sixth Street Viaduct traverses over five different rail agencies and negotiations, development and authorization of an MOU Construction & Maintenance Agreement for each agency will be the responsibility of this position.

A key responsibility will be the coordination of project activities during design and construction that may have an impact on rail operations and the compliance with all rail and safety regulations for all City and consultant staff. Coordination of all activities to minimize any disruption or disturbance to rail operations will be paramount.

This position will also assist in field identification and verification field conditions and to determine merit for immerging key issues during construction. Provide preliminary findings for issue resolution.

Structural Engineer Associate III:

There are three recommended positions to be brought on-board during several phases of the over the next year, including the EIR, ROW, and Final Design.

One position will provide a support role to the Sr. Structural Engineer PM III during the Environmental and Preliminary Design Phase. This position will provide technical assistance in the development of documents for the Environment approval process, funding and grant application and submittal process and for the assisting in report development for obtaining project authorizations.

The second position will provide support to the Sr. Structural Engineer PM II for providing project engineer support for the Final Design phase and for the developing of the CMAR process and authority and for assisting in the coordination of the CMAR Final Design process for coordination between the A/E and CM consultants. A heightened coordination and review of documents and requests will come to play during this aggressive process.

The third position will come in for providing document review and assistance during the constructability review process for bringing good solid plans to the bid process. The other three positions will also participate in this process.

All Structural Engineer Associate III positions will transition to the construction phase to provide support roles as Project Engineers for the review, prioritization, merit determination and processing of all documents from RFI, submittals, cost proposals, estimates, schedules, meeting minutes, focus meetings, negotiations and other correspondence and memos. Primary responsibilities for each position will be allocated to specific document type such as RFI or Submittals to provide a consistent understanding of the merit determination, impacts, tracking, prioritization and any rough order of magnitude of each functioning document. These positions will assist in coordination of on-site inspections by City and other agencies, permit tracking, conducting meetings and recording meeting minutes, assist on street closure issues and other local restraints.

It is anticipated on a project of this magnitude that the flow of documents from all parties will be a primary concern for best management practice for a successful project delivery and to ensure that all processes and document meet the Federal auditing requirements to maintain funding for this project.

Civil Engineer Associate III

This position will provide support to the Structural Engineer PM I related to all utility coordination issues. This position will also provide support for Right of Way issues and assist the Structural Engineer in the coordination with the rail agencies and development of MOU agreements with the five rail agencies.

The Civil Engineer Associate III position will transition to the construction phase to provide support roles as Project Engineers for the review, prioritization, merit determination and processing of all documents from RFI, submittals, cost proposals, estimates, schedules, meeting minutes, focus meetings, negotiations and other correspondence and memos. Primary responsibilities for each position will be allocated to specific document type such as RFI or Submittals to provide a consistent understanding of the merit determination, impacts, tracking, prioritization and any rough order of magnitude of each functioning document. These positions will assist in coordination of on-site inspections by City and other agencies, permit tracking, conducting meetings and recording meeting minutes, assist on street closure issues and other local restraints.

It is anticipated on a project of this magnitude that the flow of documents from all parties will be a primary concern for best management practice for a successful project delivery and to ensure that all processes and document meet the Federal auditing requirements to maintain funding for this project.

Management Analyst II:

This position's role will be establishing the proper control and tracking mechanisms for contracts, task order solicitations, task orders and notice to proceed. This also includes the

related payment expenditures and funding allocations. Reviews and prepares funding directions of all payment applications for consultants and contractors for the Office of Accounting. This includes tracking and updating all contract authority records, contract compliance review, expenditure to authority review, and insurance certification status. This will involve the tracking all expenditures against all budget allocations and funding allocations.

This will further involve the running of query reports of all expenditures to support the Project Management Team's review of project status at every phase. Provides data reports for the overall status of the budget to expenditure details.

Drafts special reports as required by the governance authority, local and Federal agencies, and the Bridge Improvement Program. Drafts and reviews Board of Public Works reports for authorizations, approvals and awards.

The Management Analyst II will provide project management process review for Federal audit of authorities and expenditures. A major responsibility will be for tracking and forecasting the consultant DBE participation that can have an impact on receiving Federal funding reimbursements for task assignments.

This position provides support in tracking and answering inquiries from Controller, City Clerk, Treasurer on issues related to authority documentation, BTRC, address changes, payment issues and coordination with the consultants and contractors.

This position will create CPO's in the SMS system for required supplies, equipment and services, as well as providing the paper documentation for Accounting for all encumbering documents for the duration of this seven year project.

This position will also supervise the Sr. Clerk Typist for overall endurances that the document control process and being followed. The Management Analyst II will also have the responsibility of creating and managing the archival and indexing process for records retention in the City's archives for the thousands of project record documents.

Senior Clerk Typist:

This position's responsibility will be provide the project's administrative support to all project staff and provide document control for the duration of the project. On other major projects this position(s) are augmented through consultant staff at a significantly higher cost.

Document control remains to be a priority and core function of a successful project and program delivery. The function is to centralize all files and provide a hard file and e-file tracking system for project team members, to provide a document cross check for project staff in their analysis for issue and proposal resolution and to provide an auditable record that will play a key role in the validation of records for all reimbursable Federal Funds.

This position applies the file coding to each incoming and outgoing document, scans and

transfers to server files, duplicates and distributes all documents. The Senior Clerk Typist also coordinates with all project staff for the proper uploading and downloading of a large quantity of support documents and the proper document status allocation within the defined categories in the E2020 on-line project management system.

This position will provide administrative support to the entire project Team for correspondence and distribution of documents and provide support in CPO's in SMS for the duration of this seven year project.