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DEPARTMENT OF
PUBLIC WORKS

ENGINEERING DIVISION

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January 22, 1991

Transportation and Community Development Committee
Sacramento, California

Honorable Members In Session:

SUBJECT: Replacement of the East Approach to the H Street Bridge Across
the American River (PN:TD66) - Project History, Proposed
Improvements, Construction and Schedule

SUMMARY

The Department of Public Works is in the process of preparing final contract documents to advertise the subject project for bids. This report discusses the project history, the proposed improvements, and the construction schedule. This report is for committee information and no action is required.

BACKGROUND

The H Street Bridge across the American River was constructed in 1931. It consists of three steel trusses spanning the main channel of the American River, a concrete west approach structure, and a wooden east approach structure. Bi-annual Caltrans inspections of the bridge and its approaches show a gradual decay of the wooden east approach structure. In 1986, two repair contracts were awarded to provide additional vertical support to the east approach. In 1987 and 1988, additional minor repairs were performed to the existing east approach. Currently, almost all of the original east approach spans have been supported at their midpoint and many of the original approach columns have been reinforced.

Subsequent to the repairs to the wood east approach in 1986, the City submitted an application to Caltrans to receive Federal Highway Bridge Replacement and Rehabilitation (HBRR) program funds for replacement of the deteriorating east approach. An inspection of the east bridge approach by City, Caltrans and Federal Highway Administration (FHWA)

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staff found that the wooden approach structure was in an advanced and irreversible state of decay. Analysis of the bridge steel truss and the concrete west approach indicated that these structures are structurally adequate. The City received permission to proceed with the replacement of the east approach to the H Street Bridge across the American River as a HBRR funded project in May 1987.

The design and construction of the replacement approach required the identification, analysis, and resolution of environmental and engineering considerations. The significant items of this project are summarized below:

PROPOSED IMPROVEMENTS

The proposed replacement of the east approach will include:

- removal of the existing wood structure which has a 42 foot wide roadway (4 - 10.5 foot lanes) and a 5 foot elevated walkway.
- construction of a new concrete approach with a 58 foot wide roadway (4 - 12 foot lanes and 5 foot shoulders) and a protected 5 foot wide walkway.
- removal of existing pole mounted luminaries (in the floodplain) and construction of approach mounted luminaries to provide improved roadway lighting. Lighting will also be provided for the bike trail which crosses under the approach structure.

The proposed improvements to the steel truss spans will include:

- upgrading the existing roadway lighting.
- mounting of new guardrails on the truss.
- mounting of a handrail on the top of the existing concrete railing along the walkway on the south side of the bridge.

The proposed improvements to the concrete west approach include:

- replacement of the existing deteriorated wooden barrier on the north side of the approach with a concrete barrier.

TRAFFIC CONTROL/DETOURS DURING CONSTRUCTION

A) VEHICULAR TRAFFIC

The H Street Bridge across the American River carries an average weekday traffic of approximately 45,000 vehicles and an average

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weekend traffic of approximately 29,000 vehicles. The bridge is busy consistently during the day, with peak directional traffic flows in the morning and evening on weekdays. To minimize the effects of the construction on the existing traffic patterns, the project will be constructed such that three traffic lanes are available from 6:00 A.M. to 7:00 P.M. weekdays (two lanes in the peak direction, and one lane in the non-peak direction) and two traffic lanes are available at night and on weekends (one lane in each direction).

An exception to this requirement will take place when the first two spans of the approach immediately adjacent to the steel truss spans (approximately 90 feet) is constructed. Because of the narrow roadway width available at the entrance to the truss, two lanes of traffic cannot safely remain available during pile driving and deck placement operations. Therefore, the entire bridge will be closed during these two separate construction operations.

It is anticipated that the pile driving operation and deck placement operation will each require two to four days. The closures will occur about three to four weeks apart. To minimize the effect of the bridge closures on traffic, each closure will be started on a Saturday. During the bridge closure, traffic detours will be established using Howe Avenue, Folsom Boulevard and Elvas Avenue. To expedite this portion of the work, precast (rather than cast-in-place) concrete structural bridge members and decking will be used.

Prior to the bridge closures being initiated, an extensive public notification effort will be made. Coordination will also be made with the County, Caltrans, Regional Transit, Sacramento State University, and emergency service organizations. Staff believes these efforts will minimize the unavoidable problems resulting from the bridge closure.

B) BICYCLE TRAFFIC

Bicycle traffic using the H Street Bridge will be detoured around the construction area by use of the Guy West Bridge to the south. Signs marking the detour route will be erected.

The American River Bike Trail currently goes under the wooden east approach structure. It will be relocated around the construction area (westerly, under the steel truss spans) during construction operations. After the replacement of the east approach is complete, the American River Bike Trail will be relocated to its original location under the east approach structure. The replacement approach structure will include new lighting of the bike trail.

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C) PEDESTRIAN TRAFFIC

Pedestrian use of the H Street Bridge is currently limited by the lack of connecting pedestrian facilities. Pedestrian traffic will be encouraged to detour around the construction area by using the Guy West Bridge. Pedestrian traffic using the sidewalk on the south side of the H Street Bridge will be provided with a stairway access down to the relocated American River Bike Trail to proceed to their destination. The replacement approach will provide a walkway protected from vehicular traffic by a barrier rail.

NOISE

The contractor must comply with City and Caltrans sound control requirements during construction operations. The construction operation noise is not expected to significantly disturb the surrounding neighborhood.

ENVIRONMENTAL DOCUMENTATION

Environmental documentation was prepared for this project in accordance with the National Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA). An historic properties survey (archaeological investigation), biological assessment (endangered and threatened species) and a Section 4(f) evaluation (use of land in a park) were performed as part of the environmental assessment process.

The project area is habitat for the endangered Valley Elderberry Longhorn Beetle. Prior to beginning construction, existing Valley Elderberry shrubs will be transplanted out of the construction area and additional Valley Elderberry shrub stems will be planted in an irrigated area to provide continued habitat for the Valley Elderberry Longhorn Beetle.

As a repair of an existing facility, a categorical Exclusion (NEPA) was approved by the FHWA for this project on November 1, 1989 and was filed with the County Clerk (for CEQA) on November 22, 1989.

COORDINATION AND PERMITS

This project required coordination with various Federal, State and Local agencies. This coordination was performed through the environmental documentation and/or permit process. The project's construction documents incorporate the requirements agreed upon with the various agencies.

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The agencies contacted and coordinated with include:

US Department of the Interior, Fish & Wildlife Service
US Department of the Army, Corps of Engineers
US Department of Transportation, Coast Guard
State Department of Fish & Game
State Reclamation Board
Sacramento County Department of Parks and Recreation

FINANCIAL DATA

This project is funded with Federal and City funds. The Federal funds consist of Highway Bridge Replacement and Rehabilitation (HBRR) funds (80% Federal funds, 20% matching City funds) for preliminary engineering work and Combined Roadway Program (CRP) funds (85.87% Federal funds, 14.13% matching City funds) for right-of-way and construction work. The two sources of federal funds are due to a revision in the federal programming procedures that occurred during this project's development. The City is using gasoline tax and major street construction tax funds for its share of the project costs.

The estimated construction cost for this project is \$2,613,000. The estimated total project cost is \$3,080,000, of which the City's estimated share is \$455,000. The current project budget, contained in PN:TD66, includes \$400,000 in gas tax funds (Fund 202) and \$300,000 in Major Street Tax funds (Fund 209). The remaining City funds over the project match will be used for project contingencies and non-participating (non-CRP funded) items of work.

Preparation of the final project plans, specification and estimate is nearing completion. The project is anticipated to go to bid in early February 1991. Construction is expected to start in June 1991.

Advertising this project will be the culmination of a joint effort by City, County, State and Federal staff. The complex nature of this project required the close coordination and support of all parties.

POLICY CONSIDERATIONS

This report is for information only and has no policy considerations.

MBE/WBE EFFORTS

This report is for information only and has no impact on MBE/WBE goals.

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RECOMMENDATION

This report is for committee information only. No action is required.

Approved for Committee
Information:



DAVID MARTINEZ
Deputy City Manager

CONTACT PERSON

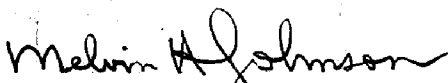
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Respectfully submitted,


THOMAS M. FINLEY
Engineering Division Manager

Approved:


MELVIN H. JOHNSON
Director of Public Works

January 22, 1991
District No. 3