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**** WARNING ** WARNING ** WARNING ** WARNING ****
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October 11, 2006

10-SJ-5-R22.4/R25.1
10-3A1204

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN JOAQUIN COUNTY IN LATHROP FROM 0.1 KM NORTH OF PARADISE CUT OVERFLOW BRIDGE TO 0.7 KM NORTH OF ROUTE 5/120 SEPARATION OVERHEAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on October 31, 2006, instead of October 18, 2006.

This addendum is being issued to set a new bid opening date as shown herein and to revise the Project Plans, and the Notice to Contractors and Special Provisions.

Project Plan Sheets 91, 103, 104, 105, 106, and 110 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheet 110A is added. A half-sized copy of the added sheet is attached for addition to the project plans.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following two paragraphs are added after the fourth paragraph as follows:

"Temporary minimum horizontal clearance for the San Joaquin River Bridge (Bridge No. 29-0252R) of 12.19 meters shall be maintained in the center of the primary navigational channel between piers 3 and 4.

Temporary minimum vertical clearance for the San Joaquin River Bridge (Bridge No. 29-0252R) shall be maintained no lower than 1.00 meter below the lowest hittable part of the primary navigational channel span within the temporary horizontal clearance area."

In the Special Provisions, Section 10-1.16, "MAINTAINING TRAFFIC," Chart No's. 1, 2, 3A, 3B, 3C, and 5 are revised as attached.

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In the Special Provisions, Section 10-1.29, "EARTHWORK," the eighth and last paragraphs are replaced with the following three paragraphs:

"Sheet piling shall be driven in place within the limits for structure excavation (Type D) shown on the plans. Sheet piling shall be installed to a sufficient depth so that additional shoring is not required below the bottom of footing elevation.

Temporary sheet piling shoring system shall conform to paragraphs 1 through 5 and paragraph 7 of Section 19-3.03, "COFFERDAMS," of the Standard Specifications and these special provisions.

Full compensation for protecting the existing levee at Pier 5 of the San Joaquin River Bridge (Bridge No. 29-0252R) including installing a temporary sheet piling shoring system, deformation and vibration monitoring, if applicable, stockpiling excavated levee materials, reusing excavated levee materials for compacted backfill, completely removing the sheet piling shoring system, and pressurized grouting along the sheet pile line of layout, as shown on the plans, and as specified in these special provisions, and as directed by the Engineer, shall be considered as included in the contract price paid per cubic meter for structure excavation (Type D) and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.29, "EARTHWORK," subsection "MONITORING OF VIBRATORY HAMMERS FOR SHEET PILING," is added prior to subsection "MEASUREMENT AND PAYMENT" as attached.

In the Special Provisions, Section 10-1.39, "PILING," the second paragraph and Item F and H of the sixth paragraph of subsection "DYNAMIC MONITORING," are revised as follows:

"The first pile driven at the support locations identified in the following table shall be designated Indicator Piles:

Bridge	Indicator Pile Support Locations
Bridge No. 29-0252R	Abutment 1
Bridge No. 29-0252R	Pier 5

F. One working day after initial driving, the Contractor shall install the instrument package on the pile and attach the cables and resume driving the pile as directed by the Engineer. Driving operations shall be suspended approximately 0.15-m above the required tip elevations, as directed by the Engineer.

H. Six working days after initial driving, the Contractor shall install the instrument package on the pile and attach the cables and resume driving the pile to the required tip elevation as directed by the Engineer."

In the Special Provisions, Section 10-1.39, "PILING," the fifth paragraph of subsection "WAVE EQUATION," is deleted and the second and fourth paragraphs of subsection "WAVE EQUATION," are revised as follows:

"The Engineer shall be allowed 12 working days after initial driving to perform and complete test pile dynamic monitoring, revise specified tip elevations, and to provide the bearing acceptance criteria curves for a given control location. Day one of 12 shall be the first day after test piles have been initially installed at that same control location.

No additional production piles shall be installed in any control location until the bearing acceptance criteria curves for test piles within the corresponding control location have been provided by the Engineer, unless otherwise approved in writing by the Engineer."

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10-3A1204

In the Special Provisions, Section 13-1.06, "LEGAL RELATIONS," the section is revised as follows:

"The provisions of Section 13-1, "RELATIONS WITH RAILROAD COMPANY," and the provisions of Section 13-1.07, "RAILROAD PROTECTIVE INSURANCE," of these special provisions shall insure directly to the benefit of Railroad."

To Proposal and Contract book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum is available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

**Chart No. 1
Multilane Lane Requirements**

Location: Northbound Route 5 from 0.1 km North of Paradise Cut Overflow Bridge to 0.7 km North of Route 5/120 Separation Overhead.

FROM HOUR TO HOUR	a.m.											p.m.															
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
Mondays through Thursdays	A	A	A	A	A	A	A					S	S	S	S	S	S	S							A	A	A
Fridays	A	A	A	A	A	A	A					S	S	S	S	S	S										
Saturdays																											
Sundays																										A	A

Legend:

- A # 1 lane may be closed in direction of travel
- S Shoulder closure permitted (with or without K-rail)
- No lane closure allowed

REMARKS:

- Provide advance PCMS at upstream of Route 5 and 205.
- There must be two adjacent mainline lanes open when closing completely the connector ramp to eastbound Route 120.

**Chart No. 2
Multilane Lane Requirements**

Location: Northbound Route 5 from 0.1 km North of Paradise Cut Overflow Bridge to 0.7 km North of Route 5/120 Separation Overhead.

FROM HOUR TO HOUR	a.m.											p.m.															
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
Mondays through Thursdays	B	B	B	B	B	S	S					S	S	S	S	S	S	S							S	S	B
Fridays	B	B	B	B	B	S	S					S	S	S	S	S	S										
Saturdays																											
Sundays																											B

Legend:

- B #2 lane may be closed in direction of travel
- S Shoulder closure permitted (with or without K-rail)
- No lane closure allowed

REMARKS:

- Must close the # 1 lane.
- No restrictions on the connector ramp to eastbound Route 120, when the above chart is in effect.
- Provide advance PCMS at upstream of Route 5 and 205.

**Chart No. 3A
Multilane Lane Requirements**

Location: Northbound Route 5 from 0.1 km North of Paradise Cut Overflow Bridge to 0.7 km North of Route 5/120 Separation Overhead.

FROM HOUR TO HOUR	a.m.											p.m.															
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
Mondays through Thursdays	C	C	C	C	C	C	C					S	S	S	S	S	S	S							C	C	C
Fridays	C	C	C	C	C	C	C					S	S	S	S	S	S										
Saturdays																											
Sundays																										C	C

Legend:

- C # 3 lane may be closed in direction of travel
- S Shoulder closure permitted (with or without K-rail)
- No lane closure allowed

REMARKS:

- Effective with no restrictions on connector to eastbound Route 120.
- Provide advance PCMS at upstream of Route 5 and 205.
- Taper must start at the gore point.

**Chart No. 3B
Multilane Lane Requirements**

Location: Northbound Route 5 from 0.1 km North of Paradise Cut Overflow Bridge to 0.7 km North of Route 5/120 Separation Overhead.

FROM HOUR TO HOUR	a.m.											p.m.															
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
Mondays through Thursdays	C	C	C	C	C	C						S	S	S	S	S	S	S									C
Fridays	C	C	C	C	C	C						S	S	S	S	S	S										
Saturdays																											
Sundays																											C

Legend:

- C # 3 lane may be closed in direction of travel
- S Shoulder closure permitted (with or without K-rail)
- No lane closure allowed

REMARKS:

- Effective when the # 1 lane only of the connector to eastbound Route 120 (chart # 4A) is closed.
- Provide advance PCMS at upstream of Route 5 and 205.
- Must close the on-ramp from Mossdale Road UC.

Chart No. 3C Multilane Lane Requirements																									
Location: Northbound Route 5 from 0.1 km North of Paradise Cut Overflow Bridge to 0.7 km North of Route 5/120 Separation Overhead.																									
FROM HOUR TO HOUR	a.m.											p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	C	C	C	C	C							S	S	S	S	S	S	S							
Fridays	C	C	C	C	C							S	S	S	S	S	S								
Saturdays																									
Sundays																									

Legend:

C # 3 lane may be closed in direction of travel, may perform shoulder closure (with or without K-rail)

S Shoulder closure permitted (with or without K-rail)

No lane closure allowed

REMARKS:

- Effective with full closure of connector-ramp to eastbound Route 120.
- Provide advance PCMS at upstream of Route 5 and 205.
- Must close the on-ramp from Mossdale Road UC.

Chart No. 5 Connector-Ramp Lane Requirements																										
Location: Northbound Route 5 On Ramp from Westbound Route 120																										
FROM HOUR TO HOUR	a.m.											p.m.														
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Mondays through Thursdays	X	X	X	X	X	X																		X	X	X
Fridays	X	X	X	X	X	X																				
Saturdays																										
Sundays																								X	X	

Legend:

X Ramp may be closed with detour signed

No work that interferes with public traffic will be allowed

REMARKS:

- Detour plans/signs required.
- No two consecutive or opposing ramps maybe closed at the same time.

MONITORING OF VIBRATORY HAMMERS FOR SHEET PILING

At the Contractor's option, vibratory hammers that are in conformance with the following requirements may be used for installation and removal of temporary sheet piling adjacent to Pier 5.

Vibratory hammers shall not be used unless the water surface elevation is below 2.0 meters

Vibration monitoring shall be performed prior to the start of construction activities and continuously during the use of a vibratory hammer.

Vibration monitoring stations shall be placed at two locations on the riverside approximately 8 meters away from the face of the temporary sheet piles. The Engineer shall approve, in writing, the exact locations of vibration monitoring stations. Ground accelerations related to the use of vibratory hammers measured at these locations shall not exceed a particle acceleration of 0.03g.

Deformation monitoring stations shall be installed at three locations approximately 8 meters, 24 meters and 32 meters from the ends of the new pier cap. The monitoring points shall consist of an approximately 610-mm long by 25 mm diameter steel rebar set in a 150 mm to 200 mm diameter concrete filled hole with sufficient reinforcing steel bar extending above the ground surface for surveying observations and measurement. Points shall be surveyed every 30 minutes as a minimum during sheet pile installation and removal operations.

The Contractor shall submit a monitoring plan in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of plans and review time shall conform to the requirements in 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications. The monitoring plan shall include the following:

- A. The name of the firm providing the vibration monitoring services.
- B. Name and resume of the person(s) that will be preparing and signing the monitoring reports. The reports shall be signed by an engineer who is registered as a Civil Engineer in the State of California, or other appropriate professional license as approved by the Engineer, with a minimum of two years experience in and who has expertise in the field of vibration monitoring.
- C. Description of the instrumentation and equipment to be used.
- D. Methods for mounting the instrumentation to the ground surface.
- E. Procedures for data collection and analysis and the location.
- F. Quantity of instrumentation at each location specified herein.
- G. Means and methods of providing warning when particle acceleration equals or exceeds specified limits.
- H. Name of the manager for use of vibration hammer with monitoring designated by the Contractor.
- I. A contingency plan for alternative construction methods when particle acceleration equals or exceeds specified limits.

The vibration monitoring equipment shall conform to the following requirements:

1. The velocity sensing transducers shall be capable of measuring velocities on the three perpendicular axes (i.e. V_x , V_y and V_z) simultaneously.
2. Frequency response of the velocity transducers and data acquisition equipment shall cover the range from less than 5Hz to more than 100Hz. Sensitivity of the velocity transducers shall range below 0.0254 millimeters per second to more than 51 millimeters per second.
3. Velocity transducers shall be field calibrated prior to use.
4. The data acquisition equipment shall be capable of simultaneously recording individual velocity transducers, in digital format, time-domain data (i.e. time vs. particle velocity) for each of the transducers.

The vibration monitoring equipment shall measure particle velocity and conversions shall be made to obtain particle acceleration. The particle velocity data shall be recorded contemporaneously and plotted continuously in ink on graphs by the data acquisition equipment. The particle acceleration data shall be plotted in ink on graphs. Graphs shall conform to the following:

1. Graphs shall be plotted including: particle velocity versus time for each transducer, and particle acceleration versus time for each transducer.
2. Graphs shall have the same vertical and horizontal axes scale.

After the vibration monitoring plan has approved by the Engineer, the vibration monitoring equipment shall be furnished and installed by the Contractor at the locations designated herein.

The first vibration monitoring prior to start of construction activities shall be the baseline for all subsequent recordings. The Contractor shall have the equipment in place and functioning properly before installing sheet piling in the vicinity of Pier 5.

The subsequent vibration monitoring shall be done during the initial use of the vibratory hammer to install temporary sheet piling. At the end of the initial 15-minutes of installation, the Contractor shall halt installation operations and convert particle velocity data to obtain particle acceleration data for this interval.

Conversions to obtain particle acceleration shall be made on a maximum of 30-minute intervals throughout the remainder of the duration of the use of vibratory hammers.

If sheet pile driving or removal activities exceed a particle acceleration of 0.03 g then all related construction activities shall be stopped and the Contractor shall propose a modified method of construction to successfully complete the work.

At the end of each work shift or work day when a vibratory hammer is used, the Contractor shall submit to the Engineer monitoring reports for each monitoring station. The report shall include the following:

1. Project identification, including District, County, Route, Post Mile, Project Name and Bridge number as shown on the project plans.
2. Locations of deformation monitoring equipment and resultant survey data.
3. Locations of vibration monitoring equipment and resultant data.
4. Location of vibration source (i.e. pile driving equipment).

The persons, firm or entities providing vibration monitoring, recording, documentation and the production of the reports shall not be employed or compensated by subcontractors, or by persons or entities hired by the subcontractors, who will provide other service's or material for the project.

Within 10 working days after the completion of the work requiring the use of a vibratory hammer, the Contractor shall submit to the Engineer a final report documenting the results of the deformation monitoring and vibration monitoring. Each location shall have a separate report. The report should summarize the data collected at the displacement monitoring stations and vibration monitoring stations.

Compliance with the section does not relieve the Contractor of full responsibility for damage caused by Contractor's operations as per Section 7-1.12 "Responsibility for Damage," of the Standard Specifications."