

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

OFFICE ENGINEER

1727 30th Street MS-43

P.O. BOX 168041

SACRAMENTO, CA 95816-8041

FAX (916) 227-6214

TTY 711

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February 25, 2011

03-Pla-80-0.3/29.3

03-3E0904

Project ID 0300000472

ACBHI-0803(238)E

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN PLACER COUNTY AT VARIOUS LOCATIONS FROM SOUTH ROSEVILLE OVERCROSSING TO WEIMAR CROSS ROAD OVERCROSSING.

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 March 22, 2011. The original bid opening date was previously postponed indefinitely under Addendum No. 1 dated December 16, 2010.

This addendum is being issued to set a new bid opening date as shown herein and revise the Project Plans, the Notice to Bidders and Special Provisions, and the Bid book and the Federal Minimum Wages with Modification Number 17 dated 02/18/11.

Project Plan Sheets 1, 2, 3, 5, 11, 13, 14, 19, 25, 26, 27, 28, 45, 46, 47, 48, 49, 50, 53, 54, 55 and 56 are revised. Copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 4A, 11A, 18A, 18B, 56A and 56B are added. Copies of the added sheets are attached for addition to the project plans.

Project Plan Sheets 4, 6, 15, 16, 17, 18, 20, 21, 22, 23, 24, 51 and 52 are deleted.

In the Notice to Bidders the fourteenth paragraph is revised as follows:

"The estimated cost of the project is \$5,300,000."

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In the Special Provisions, Section 8-2.02, "CORROSION CONTROL FOR PORTLAND CEMENT CONCRETE," the first paragraph is revised as follows:

"Portland cement concrete at Bridge No. 19-0042, Bridge No. 19-0023 and, Bridge No.19-0024 is considered to be in a corrosive environment and shall conform to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions."

In the Special Provisions, Section 8-2.03, "FREEZING CONDITION REQUIREMENTS," is revised as attached.

In the Special Provisions, Section 8-2.04, "RAPID STRENGTH CONCRETE FOR STRUCTURES," subsection "Quality Control and Assurance," subsection "Prequalification of RSC," is revised as follows.:

**"Quality Control and Assurance
Prequalification of RSC**

Prequalification of a RSC mix design includes determining the opening age and achieving the minimum specified 28-day compressive strength.

Prequalify RSC under the specifications for prequalification of concrete specified by compressive strength in Section 90-9.01, "General," of the Standard Specifications. Determine the opening age as follows:

1. Fabricate at least 5 test cylinders to be used to determine the age of break.
2. Immediately after fabrication of the 5 test cylinders, store the cylinders in a temperature medium of 70 ± 3 °F until the cylinders are tested.
3. Determine the age of break to achieve an average strength of the 5 test cylinders of not less than 1200 psi . Not more than 2 test cylinders shall have a strength of less than 1150 psi.
4. The opening age is the age of break plus 1 hour."

In the Special Provisions, Section 8-2.04, "RAPID STRENGTH CONCRETE FOR STRUCTURES," subsection "CONSTRUCTION," subsection "Curing Concrete," the last paragraph is revised as follows:

"If compressive strength tests are performed in the field showing that the concrete has achieved 1200 psi you may open the lane to traffic at the age of break. Perform the compressive strength tests under the provisions for sampling and testing cylinders in Section 90-9.01, "General," of the Standard Specifications. The decision to use this option must be made in writing to the Engineer before beginning construction."

In the Special Provisions, Section 9, "DESCRIPTION OF BRIDGE WORK," is revised as attached.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the fifth paragraph is deleted.

In the Special Provisions, Section 10-1.12, "MAINTAINING TRAFFIC," lane closure charts are replaced as attached.

In the Special Provisions, Section 10-1.195, "TEMPORARY CRASH CUSHION (TYPE ABSORB 350)," is added as attached.

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In the Special Provisions, Section 10-1.22, "EXISTING HIGHWAY FACILITIES," the following paragraph is added after the first paragraph.

"Except as otherwise provided for damaged materials in Section 15-2.04, "Salvage," of the Standard Specifications, the materials to be salvaged shall remain the property of the State, and shall be cleaned, packaged, bundled, tagged, and hauled to the Sacramento Bridge yard at 2809 B Street, Sacramento, CA 95816 and stockpiled.

The Contractor shall notify the Engineer and the Bridge Maintenance Supervisor at (916) 445-0181 a minimum of 48 hours prior to hauling salvaged material to the Recycle Center."

In the Special Provisions, Section 10-1.22, "EXISTING HIGHWAY FACILITIES," subsection "BRIDGE REMOVAL (PORTION)," is revised as attached.

In the Special Provisions, Section 10-1.22, "EXISTING HIGHWAY FACILITIES," subsection "PREPARE CONCRETE BRIDGE DECK SURFACE," subsection "Construction," the fifth paragraph is revised as follows:

"For Bridge No.s 19-0134, 19-0077, 19-0150, 19-0099, 19-0094, 19-0042, 19-0023 and 19-0024, residue from abrasive blasting must be removed by a vacuum attachment operating concurrently with blasting equipment when abrasive blasting within 10 feet of public traffic."

In the Special Provisions, Section 10-1.22, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE UNSOUND CONCRETE," is added after subsection "PREPARE CONCRETE BRIDGE DECK SURFACE," as attached.

In the Special Provisions, Section 10-1.23, "EARTHWORK," is revised as follows:

"Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these special provisions.

Surplus excavated material shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Where a portion of the existing surfacing is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 0.17-foot before removing the surfacing. Full compensation for cutting the existing surfacing shall be considered as included in the contract price paid per cubic yard for roadway excavation and no additional compensation will be allowed therefor.

Reinforcement or metal attached to reinforced concrete rubble placed in embankments shall not protrude above the grading plane. Prior to placement within 2 feet below the grading plane of embankments, reinforcement or metal shall be trimmed to no greater than 3/4 inch from the face of reinforced concrete rubble. Full compensation for trimming reinforcement or metal shall be considered as included in the contract prices paid per cubic yard for the types of excavation shown in the Engineer's estimate, or the contract prices paid for furnishing and placing imported borrow or embankment material, as the case may be, and no additional compensation will be allowed therefor.

If structure excavation or structure backfill for bridges is not otherwise designated by type and payment for the structure excavation or structure backfill has not otherwise been provided for in the Standard Specifications or these special provisions, the structure excavation or structure backfill will be measured and paid for as structure excavation (bridge) or structure backfill (bridge), respectively.

Quantities of earthwork to be paid for as structure excavation (bridge) and structure backfill (bridge) will be measured by the cubic foot."

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In the Special Provisions, Section 10-1.31, "GRIND EXISTING BRIDGE DECK," the third paragraph is revised as follows:

"Grinding shall be performed at the following locations:

- A. Bridge No. 19-0134
- B. Bridge No. 19-0099
- C. Bridge No. 19-0077
- D. Bridge No. 19-0150"

In the Special Provisions, Section 10-1.33, "CONCRETE STRUCTURES," is revised as attached.

In the Special Provisions, Section 10-1.34, "STRUCTURE APPROACH SLABS (TYPE R)," is revised as attached.

In the Special Provisions, Section 10-1.345, "PAVING NOTCH EXTENSION," is added as attached.

In the Special Provisions, Section 10-1.40, "POLYESTER CONCRETE OVERLAY," is revised as attached.

In the Special Provisions, Section 10-1.405, "RAPID SETTING CONCRETE PATCH," is added as attached.

In the Special Provisions, Section 10-1.41, "REINFORCEMENT," is revised as attached.

In the Special Provisions, Section 10-1.44, "METAL BEAM GUARD RILING," subsection "ALTERNATIVE IN-LINE TERMINAL SYSTEM," is deleted.

In the Special Provisions, Section 10-1.45, "CONCRETE BARRIER," the third, fourth and fifth paragraphs are revised as follows:

"Concrete for use in concrete barriers in Bridge No.s 19-0042, 19-0023 and 19-0024 shall contain not less than 675 pounds of cementitious material per cubic yard and shall be air-entrained concrete in conformance with the provisions in "Materials" of these special provisions.

Bar reinforcing steel for use in concrete barriers in Bridge No.s 19-0042, 19-0023 and 19-0024 shall conform to the provisions in Section 52-1.02B, "Epoxy-coated Reinforcement," of the Standard Specifications.

Concrete barriers on bridge No.s 19-0042, 19-0023 and 19-0024 or walls shall be cured in conformance with the provisions in Section 90-7.01A, "Water Method," of the Standard Specifications."

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In the Bid book, in the "Bid Item List," Items 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22, 23, 28, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, 59, 62, 63, 64, 69 and 72 are revised, Items 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85 and 86 are added and Items 30, 53, 61 and 73 are deleted as attached.

To Bid book holders:

Replace the entire "Bid Item List" in the Bid book with the attached revised Bid Item List. The revised Bid Item List is to be used in the bid.

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 Bidders section of the Notice to Bidders 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 Bid book.

Submit bids in the Bid 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 addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/03/03-3E0904

If you are not a Bid 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,


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

Attachments

8-2.03 FREEZING CONDITION REQUIREMENTS

GENERAL

For Bridge No. 19-0042, Bridge No. 19-0023 and, Bridge No. 19-0024, the mortar strength of fine aggregate relative to the mortar strength of Ottawa sand shall be a minimum of 100 percent as determined by California Test 515.

Portland cement concrete shall contain not less than 675 pounds of cementitious material per cubic yard unless a higher cementitious material content is specified in these special provisions.

An air-entraining admixture conforming to the provisions in Section 90-4, "Admixtures," of the Standard Specifications shall be added to the concrete at the rate required to result in an air content of 6.0 ± 1.5 percent in the freshly mixed concrete, unless a different air content is specified in these special provisions. Air-entraining admixture is not required in concrete placed at least 2 feet below the adjacent undisturbed grade or at least 3 feet below compacted finished grade, if the concrete will not experience freezing conditions during construction.

CONCRETE NEAR DEICING CHEMICALS

The equations in Section 90-2.01C, "Required Use of Supplementary Cementitious Materials," of the Standard Specifications, shall not apply to cementitious material for concrete at Bridge No. 19-0042, Bridge No. 19-0023, and Bridge No. 19-0024. The cementitious material for this concrete shall be composed of any combination of portland cement and at least one SCM, satisfying Equation (1):

Equation (1)

$$\frac{(25 \times UF) + (12 \times FA) + (10 \times FB) + (6 \times SL)}{TC} \geq X$$

SCMs for use in this concrete shall satisfy the following equations:

Equation (2)

$$\frac{4 \times (FA + FB)}{TC} \leq 1.0$$

Equation (3)

$$\frac{(10 \times UF)}{TC} \leq 1.0$$

Equation (4)

$$\frac{2 \times (UF + FA + FB + SL)}{TC} \leq 1.0$$

Where:

UF = Silica fume, metakaolin, or UFFA, including the amount in blended cement, pounds per cubic yard. If used, the minimum amount of UF shall be 5 percent.

FA = Fly ash or natural pozzolan conforming to the requirements in AASHTO Designation: M 295, Class F or N with a CaO content up to 10 percent, including the amount in blended cement, pounds per cubic yard. If used, the minimum amount of FA shall be 15 percent.

FB = Fly ash or natural pozzolan conforming to the requirements in AASHTO Designation: M 295, Class F with a CaO content up to 15 percent, including the amount in blended cement, pounds per cubic yard. If used, the minimum amount of FB shall be 15 percent.

SL = GGBFS, including the amount in blended cement, pounds per cubic yard.

TC = Total amount of cementitious material used in the mix, pounds per cubic yard.

X = 1.8 for innocuous aggregate, 3.0 for all other aggregate.

The concrete mix design shall satisfy the following equation:

Equation (5)

$$\frac{27 \times (TC - MC)}{MC} \leq 5.0$$

Where:

TC = Total amount of cementitious material used in the mix, pounds per cubic yard.

MC= Minimum amount of cementitious material specified, pounds per cubic yard.

CEMENTITIOUS MATERIAL

All other cementitious material for this project shall conform to Section 90, "Portland Cement Concrete," of the Standard Specifications, and the following:

$$\frac{(41 \times UF) + (19 \times F) + (11 \times SL)}{TC} \leq 7.0$$

Where:

UF = Silica fume, metakaolin, or UFFA, including the amount in blended cement, pounds per cubic yard.

F = Fly ash or natural pozzolan conforming to the requirements in AASHTO Designation: M 295, Class F or N, including the amount in blended cement, pounds per cubic yard. (equivalent to either FA or FB as defined in Section 90, "Portland Cement Concrete," of the Standard Specifications.)

SL = GGBFS, including the amount in blended cement, pounds per cubic yard.

TC = Total amount of cementitious material used, pounds per cubic yard.

SECTION 9. DESCRIPTION OF BRIDGE WORK

The bridge work to be done consists, in general, of grinding the bridge deck and, overlaying the bridge deck with polyester concrete as shown on the plans at the following structures:

CIRBY WAY OVERCROSSING Bridge No. 19-0134

The bridge work to be done consists, in general, of grinding the bridge deck, replacing joint seals and overlaying the bridge deck with polyester concrete as shown on the plans at the following structures:

PENRYN ROAD OVERCROSSING Bridge No. 19-0099

The bridge work to be done consists, in general, of injecting soffit cracks with epoxy, grinding the bridge deck and overlaying the bridge deck with polyester concrete as shown on the plans at the following structures:

SOUTH ROSEVILLE OVERCROSSING Bridge No. 19-0077

The bridge work to be done consists, in general, of grinding the bridge deck, replacing joint seals, overlaying the bridge deck with polyester concrete, and repairing abutment back wall as shown on the plans at the following structures:

LEAD HILL DRIVE OVERCROSSING Bridge No. 19-0150

The bridge work to be done consists, in general, overlaying the bridge deck and approach slabs with polyester concrete, replacing joint seals and patching spalls at the exterior girder, extending the paving notch, removing unsound concrete on the bridge deck and patching the removed area with rapid setting concrete patch, removing approach material and placing an approach slab, removing and replacing concrete barrier as shown on the plans at the following structures:

ROCKLIN ROAD UNDERCROSSING Bridge No. 19-0094

The bridge work to be done consists, in general, of removing asphalt concrete with membrane seal, overlaying the bridge deck with polyester concrete, removing and salvaging bridge rail, removing existing approach material, portion of wingwall and concrete barrier, placing new approach slab, placing new joint seals, snow plow deflectors and new concrete barrier, rebuilding wing wall and extending the paving notch as shown on the plans at the following structures:

BOWMAN UNDERCROSSING Bridge No. 19-0042

The bridge work to be done consists, in general, of removing asphalt concrete with membrane seal, overlaying the bridge deck and approach slabs with polyester concrete, removing and salvaging bridge rail, removing existing approach material, portion of wingwall and concrete barrier, placing new approach slab, placing new joint seals, new concrete barrier, rebuilding wing wall and extending the paving notch as shown on the plans at the following structures:

BOWMAN OVERHEAD (SOUTH) Bridge No. 19-0023

BOWMAN OVERHEAD (NORTH) Bridge No. 19-0024

Chart No. 1 Conventional Highway Lane Requirements																											
County: PLACER					Route/Direction: I-80 EB/WB South Roseville OC (Br #19-0077)										PM: 0.27/29.3												
Closure Limits:																											
FROM HOUR TO HOUR		24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Mondays through Thursdays		1	1	1	1	1	1																		1	1	1
Fridays		1	1	1	1	1	1																		1	1	1
Saturdays		1	1	1	1	1	1	1	1														1	1	1	1	1
Sundays		1	1	1	1	1	1	1	1														1	1	1	1	1
Legend:																											
1		Provide at least one through traffic lane open in direction of travel																									
		Work permitted within project right of way where shoulder or lane closure is not required																									
REMARKS:																											
<ul style="list-style-type: none"> This chart is for work on the overcrossing only. No closures allowed on mainline I-80. Ramp adjacent to the closed lane may be closed. Only one ramp may be closed at a time. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions. 																											

Chart No. 2 Conventional Highway Lane Requirements																													
County: PLACER					Route/Direction: I-80 EB/WB Cirby Way OC (Br #19-0134) Lead Hill Drive OC (Br #19-0150)										PM: 0.27/29.32														
Closure Limits:																													
FROM HOUR TO HOUR		24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
Mondays through Thursdays		1	1	1	1	1	1	1																	1	1	1	1	1
Fridays		1	1	1	1	1	1	1																	1	1	1	1	1
Saturdays		1	1	1	1	1	1	1	1														1	1	1	1	1	1	
Sundays		1	1	1	1	1	1	1	1														1	1	1	1	1	1	
Legend:																													
1		Provide at least one through traffic lane open in each direction of travel																											
		Work permitted within project right of way where shoulder or lane closure is not required																											
REMARKS:																													
<ul style="list-style-type: none"> This chart is for work on the overcrossings only. No closures allowed on mainline I-80. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions. 																													

**Chart No. 3
Freeway/Expressway Lane Requirements**

County: PLACER	Route/Direction: I-80/Eastbound Rocklin Road UC (Br #19-0094)	PM: 0.27/29.3
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Closure Limits:																										
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Mondays through Thursdays	1	1	1	1	1	1	2																2	2	1	1
Fridays	1	1	1	1	1	1	2																		2	1
Saturdays	1	1	1	1	1	1	1	2															2	2	1	1
Sundays	1	1	1	1	1	1	1	1	1													2	2	1	1	1

- Legend:
- 1 Provide at least one through freeway lane open in direction of travel
 - 2 Provide at least two adjacent through freeway lanes open in direction of travel
 - Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- There are three traffic lanes available.
- Ramp adjacent to closed freeway lane may be closed.
- Only one ramp may be closed at a time.
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

**Chart No. 4
Freeway/Expressway Lane Requirements**

County: PLACER	Route/Direction: I-80/Westbound Rocklin Road UC (Br #19-0094)	PM: 0.27/29.3
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Closure Limits:																									
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	2															2	2	1	1	1
Fridays	1	1	1	1	1	2																2	2	1	1
Saturdays	1	1	1	1	1	1	1	2															2	1	1
Sundays	1	1	1	1	1	1	1	1	1														2	1	1

Legend:

- 1 Provide at least one through freeway lane open in direction of travel
- 2 Provide at least two adjacent through freeway lanes open in direction of travel
- Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- There are three traffic lanes available.
- Ramp adjacent to closed freeway lane may be closed.
- Only one ramp may be closed at a time.
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

**Chart No. 5
Conventional Highway Lane Requirements**

County: PLACER	Route/Direction: I-80 EB/WB Penryn Road OC (Br #19-0099)	PM: 0.27/29.3
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Closure Limits:																									
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	1	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R			R	R	R	R	R	R	R			R	R	R	R	R	R	R
Fridays	R	R	R	R	R	R	R			R	R	R	R	R	R	R			R	R	R	R	R	R	R
Saturdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Sundays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Legend:

R Provide at least one through traffic lane, not less than 11 feet in width, for use by both directions of travel (Reversing Control)

Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- This chart is for work on the overcrossing only. No closures allowed on mainline I-80.
- Ramps are to remain open during construction. They may be controlled by flaggers.
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

**Chart No. 6
Freeway/Expressway Lane Requirements**

County: PLACER	Route/Direction: I-80/Eastbound EB Bowman UC (Br #19-0042) EB Bowman OH (South) Br #19-0023 EB Bowman OH (North) Br #19-0024	PM: 0.27/29.32
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Closure Limits:																									
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	1	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	
Fridays	1	1	1	1	1	1	1	1	1	2	2	2	2	2						2	2	2	1	1	
Saturdays	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Sundays	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1

- Legend:
- 1 Provide at least one through freeway lane open in direction of travel
 - 2 Provide at least two adjacent through freeway lanes open in direction of travel
 - Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- There are three traffic lanes available.
- Ramp adjacent to closed freeway lane may be closed.
- Only one ramp may be closed at a time.
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

**Chart No. 7
Freeway/Expressway Lane Requirements**

County: PLACER	Route/Direction: I-80/Westbound WB Bowman UC (Br #19-0042) WB Bowman OH (South) Br #19-0023 WB Bowman OH (North) Br #19-0024	PM: 0.27/29.32
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Closure Limits:																									
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Fridays	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Saturdays	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
Sundays	1	1	1	1	1	1	1	1	2	2										2	2	2	1	1	1

- Legend:
- 1 Provide at least one through freeway lane open in direction of travel
 - 2 Provide at least two adjacent through freeway lanes open in direction of travel
 - Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- There are three traffic lanes available.
- Ramp adjacent to closed freeway lane may be closed.
- Only one ramp may be closed at a time.
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

**Chart No. 8
Freeway/Expressway Lane Requirements**

County: PLACER	Route/Direction: I-80 EB/WB EB/WB Bowman UC Br #19-0042 EB/WB Bowman OH (South) Br #19-0023 EB/WB Bowman OH (North) Br #19-0024	PM: 0.27/29.32
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Closure Limits:																										
FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Mondays																								2	2	
Tuesdays through Wednesdays	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Thursdays	2	2	2	2	2	2	2	2	2	2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	
Fridays through Sundays	S	S	S	S	S	S	S	S	S	S																

Legend:

2	Provide at least two through freeway lanes open in each direction of travel
S	Shoulder closure permitted
	Work permitted within project right of way where shoulder or lane closure is not required

REMARKS:

- There are three traffic lanes available in each direction.
- This chart can only be used when contractor is using the configurations depicted on SC-1 & SC-7.
- This chart may only be used from the day after Labor Day to Memorial Day (Off Peak Season).
- See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.

10-1.195 TEMPORARY CRASH CUSHION (TYPE ABSORB 350)

This work shall consist of furnishing, installing, and maintaining temporary crash cushion (Type ABSORB 350) at each location shown on the plans, as specified in these special provisions or where designated by the Engineer.

Temporary crash cushion shall be an ABSORB-350, 9-element system, as manufactured by Barrier Systems, Inc., and shall include the items detailed for temporary crash cushion shown on the plans.

The successful bidder can obtain the crash cushion from the manufacturer, Barrier Systems, Inc., through its distributor, Statewide Safety and Signs at the following locations:

522 Lindon Lane, Nipomo, CA 93444
Phone: (805) 929-5070
Fax: (805) 929-5786

323 Commercial Street, San Jose, CA 95112
Phone: (408) 993-9770
Fax: (408) 993-9773

13755 Blaisdell Place, Poway, CA 92064
Phone: (858) 679-7292
Fax: (858) 679-7117

130 Grobic Court, Fairfield, CA 94533
Phone: (707) 864-9952
Fax: (707) 864-9956

The price quoted by the manufacturer for ABSORB-350, FOB Fairfield, California is \$9,090.00, not including sales tax.

The above price will be firm for orders placed on or before November 15, 2011, provided delivery is accepted within 90 days after the order is placed.

The Contractor shall furnish the Engineer one copy of the manufacturer's plan and parts list.

The Contractor shall provide the Engineer with a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications. The Certificate of Compliance shall certify that the crash cushion conforms to the contract plans and specifications, conforms to the prequalified design and material requirements, and was manufactured in conformance with the approved quality control program.

Crash cushion shall be installed in conformance with the manufacturer's installation instructions.

Temporary crash cushions (Type ABSORB 350) shall be maintained in place at each location, including times when work is not actively in progress. When no longer required, as determined by the Engineer, Temporary crash cushions (Type ABSORB 350) shall be removed from the site of the work.

Temporary crash cushion systems damaged due to the Contractor's operations shall be repaired immediately by the Contractor at the Contractor's expense. Temporary crash cushion systems damaged beyond repair, as determined by the Engineer, due to the Contractor's operations shall be removed and replaced by the Contractor at the Contractor's expense.

A Type R or P marker panel shall be attached to the front of the temporary crash cushion (Type ABSORB 350), when the closest point of the crash cushion array is within 12 feet of the traveled way. The marker panel, when required, shall be firmly fastened to the temporary crash cushion (Type ABSORB 350) with commercial quality hardware or by other methods determined by the Engineer.

At the completion of the project, temporary crash cushion systems and marker panels shall become the property of the Contractor and shall be removed from the site of the work. Temporary crash cushion systems shall not be installed in the permanent work.

Temporary crash cushion (Type ABSORB 350) will be measured by the unit as determined from actual count in place in the completed work.

Repairing systems damaged by public traffic will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications. Systems damaged beyond repair by public traffic, when ordered by the Engineer, shall be removed and replaced immediately by the Contractor. Systems replaced due to damage by public traffic will be measured and paid for as temporary crash cushion (Type ABSORB 350).

The contract unit price paid for temporary crash cushion (Type ABSORB 350) shall include full compensation for furnishing all labor, materials (including marker panels), tools, equipment, and incidentals, and for doing all the work involved in furnishing, installing, maintaining, moving, and removing from the site of the work when no longer required (including those damaged by public traffic) temporary crash cushion systems, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

BRIDGE REMOVAL (PORTION)

Removing bridges or portions of bridges shall conform to the provisions in Section 15-4, "Bridge Removal," of the Standard Specifications and these special provisions.

Remove bridge railing, concrete barrier and portion of wing wall as shown on the plans at the following bridges:

Location A
BOWMAN UNDERCROSSING
Bridge No. 19-0042

Location B
BOWMAN OVERHEAD (SOUTH)
Bridge No. 19-0023

Location C
BOWMAN OVERHEAD (NORTH)
Bridge No. 19-0024

Remove existing concrete barrier as shown on the plans at the following bridges:

Location D
ROCKLIN ROAD UNDERCROSSING
Bridge No. 19-0094

Removed materials that are not to be salvaged or used in the reconstruction shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

The Contractor shall submit a complete bridge removal plan to the Engineer for each bridge listed above, detailing procedures, sequences, and all features required to perform the removal in a safe and controlled manner.

The bridge removal plan shall include, but not be limited to, the following:

- A. Equipment locations on the structure during removal operations.
- B. Locations where work is to be performed over traffic, utilities, or railroad property.
- C. Details, locations, and types of protective covers to be used.
- D. Measures to assure that people, property, utilities, and improvements will not be endangered.
- E. Details and measures for preventing material, equipment, and debris from falling onto public traffic, or railroad property.

When protective covers are required for removal of portions of a bridge or when superstructure removal work on bridges is involved, the Contractor shall submit working drawings with design calculations to the Engineer for the proposed bridge removal plan, and the bridge removal plan shall be prepared and signed by an engineer who is registered as a Civil Engineer in the State of California. The design calculations shall be adequate to demonstrate the stability of the structure during all stages of the removal operations. Calculations shall be provided for each stage of bridge removal and shall include dead and live load values assumed in the design of protective covers.

Protective covers, as required, shall be designed and constructed in conformance with the provisions in Section 51-1.06, "Falsework," of the Standard Specifications and these special provisions.

The bridge removal plan shall conform to the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of sets of drawings, design calculations, and unless otherwise specified in the following table, the time for reviewing bridge removal plans shall be the same as specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

The time to be provided for the Engineer's review of the bridge removal plans for removing specific structures, or portions thereof, shall be as follows:

Structure or Portion of Structure	Review Time - Weeks
19-0023	6
19-0024	6

For bridge removal over railroad property, approval by the Engineer of the bridge removal plans will be contingent upon the drawings being satisfactory to the railroad company involved.

Temporary support shoring, temporary bracing, and protective covers over railroad property shall conform to the latest guidelines of the railroad company involved and shall provide the minimum clearances required under "Relations with Railroad Company" of these special provisions for the passage of railroad traffic.

The following additional requirements apply to the removal portions of bridges whenever the removal work is to be performed over public traffic or railroad property:

- A. A protective cover shall be constructed before beginning bridge removal work. The protective cover shall be supported by shoring, falsework, or members of the existing structure. The Contractor shall be responsible for designing and constructing safe and adequate protective covers, shoring, and falsework with sufficient strength and rigidity to support the entire load to be imposed.
- B. The construction and removal of the protective cover, and the installation and removal of temporary railings shall conform to the provisions in "Order of Work," "Maintaining Traffic," "Temporary Railings" of these special provisions.
- C. Bridge removal methods shall be described in the working drawings and shall be supported by calculations with sufficient details to substantiate live loads used in the protective cover design. Dead and live load values assumed for designing the protective cover shall be shown on the working drawings.
- D. The protective cover shall prevent any materials, equipment, or debris from falling onto public traffic or railroad property. The protective cover shall have a minimum strength equivalent to that provided by good, sound Douglas fir planking having a nominal thickness of 2 inches. Additional layers of material shall be furnished as necessary to prevent fine materials or debris from sifting down upon the traveled way and shoulders.
- E. During the removal of bridge segments, and when portions of the bridge, such as deck slabs or box girder slabs, comply with the requirements for the protective cover, a separate protective cover need not be constructed.
- F. At locations where only bridge railing is to be removed, the protective cover shall extend from the face of the exterior girder or at least 2 feet inside of the bridge railing to be removed, whichever is less, to at least 4 feet beyond the outside face of the bridge railing.
- G. Falsework or supports for protective covers shall not extend below the vertical clearance level nor to the ground line at any location within the roadbed.
- H. The construction of the protective cover as specified herein shall not relieve the Contractor of responsibilities specified in Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications.
- I. Before removal of the protective cover, the Contractor shall clean the protective cover of all debris and fine material.

For bridge removal work that requires the Contractor's registered engineer to prepare and sign the bridge removal plan, the Contractor's registered engineer shall be present at all times when bridge removal operations are in progress. The Contractor's registered engineer shall inspect the bridge removal operation and report in writing on a daily basis the progress of the operation and the status of the remaining structure. A copy of the daily report shall be available at the site of the work at all times. Should an unplanned event occur or the bridge operation deviate from the approved bridge removal plan, the Contractor's registered engineer shall submit immediately to the Engineer for approval the procedure of operation proposed to correct or remedy the occurrence.

REMOVE UNSOUND CONCRETE

This work shall consist of the removal and disposal of unsound portland cement concrete, unsound epoxy concrete patches, and all asphalt concrete patches from the decks, curbs, and railings of bridges. Unsound concrete shall be removed as shown on the plans and to the limits designated by the Engineer.

Unsound concrete is generally that concrete that emits a relatively dead or hollow sound when a chain is dragged over its surface or its surface is tapped with a metal tool. Concrete encasing corroded reinforcing steel beyond the limits identified by the sound may be considered unsound concrete. The Engineer will determine the concrete soundness.

Equipment and tools shall not be used to remove unsound concrete that, in the opinion of the Engineer, cause the removal of excess quantities of sound concrete along with the unsound concrete. Equipment shall be fitted with suitable traps, filters, drip pans, or other devices to prevent oil or other deleterious matter from being deposited on the deck.

After the removal of unsound concrete has been completed, any existing reinforcing steel that has been exposed shall be restored to position and blocked and tied in conformance with the provisions in Section 52, "Reinforcement," of the Standard Specifications.

Reinforcing steel that has been damaged and rendered useless by the Contractor's operations shall be repaired or replaced by the Contractor at the Contractor's expense.

Removing unsound concrete will be paid for at the contract price per cubic foot for remove unsound concrete.

When the voids created by the removal of unsound concrete are filled with rapid setting concrete patches, the pay quantities for remove unsound concrete, in cubic feet, shall be the same as the pay quantities in cubic feet determined for rapid setting concrete (patch) as specified in "Rapid Setting Concrete Patches" of these special provisions. No deduction in pay quantities for remove unsound concrete will be made for concrete used to fill spalls that existed prior to the start of the work.

Pay quantities determined by the methods of measurement specified in this section will not necessarily be equal to the quantities computed from the actual dimensions of the concrete actually removed. No allowance will be made in the event that the pay quantities do not equal the volume of concrete actually removed.

The contract price paid per cubic foot for remove unsound concrete shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removing unsound concrete in conformance with the details shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.33 CONCRETE STRUCTURES

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Concrete for repairing backwall at Bridge No. 19-0150 and rebuilding wingwalls at Bridge No.s 19-0023, 19-0024 and 19-0042, shall be structural concrete, bridge.

GENERAL

Shotcrete shall not be used as an alternative construction method for reinforced concrete members unless otherwise specified.

DRILL AND BOND DOWELS

Drilling and bonding dowels shall conform to the details shown on the plans, the provisions in Section 83-2.02D(1), "General," of the Standard Specifications, and these special provisions.

Dowels shall conform to the provisions for bar reinforcement in "Reinforcement" of these special provisions.

If reinforcement is encountered during drilling before the specified depth is attained, the Engineer shall be notified. Unless the Engineer approves coring through the reinforcement, the hole will be rejected and a new hole, in which reinforcement is not encountered, shall be drilled adjacent to the rejected hole to the depth shown on the plans.

Unless otherwise provided, dowels to be bonded into drilled holes will be paid for as bar reinforcing steel (bridge).

CONCRETE

Concrete at Bridge No.s 19-0023, 19-0024 and 19-0042 shall conform to the requirements in "Freezing Condition Requirements," and "Corrosion Control For Portland Cement Concrete," of these special provisions, except that concrete in bridge decks shall contain not less than 675 pounds of cementitious material per cubic yard.

Concrete used in the portions of structures listed in the following table shall contain not less than 675 pounds of cementitious material per cubic yard.

Structure	Portion of Bridge
19-0023	All portions being repaired
19-0024	All portions being repaired
19-0042	All portions being repaired

MEASUREMENT AND PAYMENT

Measurement and payment for concrete in structures shall conform to the provisions in Section 51-1.22, "Measurement," and Section 51-1.23, "Payment," of the Standard Specifications and these special provisions, except that all concrete involved in the repair of back wall at Bridge No. 19-0150 and wingwall at Bridge No. 19-0023, 19-0024 and 19-0042 will be paid for at the contract price per cubic foot for structural concrete, bridge.

Full compensation for public notification and airborne monitoring for deck crack treatment shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge, and no additional compensation will be allowed therefor.

10-1.34 STRUCTURE APPROACH SLABS (TYPE R)

GENERAL

Summary

This work includes removing portions of existing structures, existing pavement and base including reinforced concrete approach slabs, asphalt concrete surfacing, portland cement concrete pavement, and constructing new reinforced concrete approach slabs at structure approaches.

Reinforced concrete approach slabs must comply with Section 51, "Concrete Structures," of the Standard Specifications.

Quality Control and Assurance

Trial Slab

Before beginning work on approach slabs constructed using RSC, you must successfully complete one or more trial slabs for each concrete mix design to be used in constructing the approach slabs.

Trial slabs must be constructed, finished, cured, and tested with the materials, tools, equipment, personnel, and methods to be used in completing the approach slab. Trial slabs must demonstrate that you are capable of producing approach slabs in conformance with the provisions in this section, within anticipated time periods including delivery, placement, finishing, and curing times, and under similar atmospheric and temperature conditions expected during construction operations. Multiple trial slabs for each approach slab concrete mix design may be required to envelop variable atmospheric conditions.

The minimum trial slab dimensions must be 10' x 20' x 9". Place trial slabs near the job site at a location acceptable to the Engineer except slabs must not be placed on the roadway or within the project limits.

Perform compressive strength testing under Section 90-9, "Compressive Strength," of the Standard Specifications. Trial slab concrete must develop compressive strengths of at least 1200 psi at the age of break used for prequalification of the concrete, and at least 2500 psi at 3 days.

MATERIALS

Concrete

Concrete for structure approach slabs must contain not less than 675 pounds of cementitious material per cubic yard and must either:

1. Cure for not less than 5 days before opening to public traffic, or
2. Comply with "Rapid Strength Concrete for Structures" of these special provisions.

Concrete at Bridge No.s 19-0042, 19-0023 and 19-0024 must comply with "Corrosion Control For Portland Cement Concrete," and "Freezing Condition Requirements" of these special provisions.

Temporary Structural Section

HMA must consist of commercial quality aggregate and asphalt binder. The grading of the aggregate must comply with the 3/4-inch HMA Types A and B grading specified in Section 39-1.02E, "Aggregate," of the Standard Specifications. The asphalt binder must comply with the requirements for liquid asphalt SC-800 in Section 93, "Liquid Asphalts," of the Standard Specifications. The amount of asphalt binder to be mixed with the aggregate must be approximately 0.3 percent less than the optimum bitumen content as determined by California Test 367.

Aggregate Base (Approach Slab)

Aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete must be produced from commercial quality aggregates consisting of broken stone, crushed gravel or natural rough-surfaced gravel, and sand, or any combination thereof. The grading of the aggregate base must comply with the 3/4-inch maximum grading specified in Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications.

Miscellaneous Materials

Steel components of abutment ties, including plates, nuts, washers, and rods, must comply with Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

For Bridge No.s 19-0042, 19-0023 and 19-0024 epoxy coat bar reinforcement under Section 52-1.02B, "Epoxy-coated Reinforcement" of the Standard Specifications.

Steel angles, plates, and bars at the concrete barrier joints must comply with Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

Hardboard and expanded polystyrene must comply with Section 51-1.12D, "Sheet Packing, Preformed Pads, and Board Fillers," of the Standard Specifications.

Building paper must be commercial quality 30-pound asphalt felt.

PVC conduit used to encase the abutment tie rod must be commercial quality.

CONSTRUCTION

General

The thickness shown on the plans for structure approach slabs is the minimum thickness. The thickness may vary depending on the thickness of the pavement and base materials removed.

Dispose of all materials no longer required in the work under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Schedule your work so that the pavement and base materials removed during a work period are replaced in that same work period with properly finished and cured approach slab concrete before the time the lane is to be opened to public traffic as specified in "Maintaining Traffic" of these special provisions.

If the existing pavement and base materials are removed, and you are unable to construct, finish, and cure the new approach slab by the time the lane is to be opened to public traffic, you must fill the excavation with a temporary roadway structural section as specified in this section, "Structure Approach Slabs (Type R)."

Temporary Roadway Structural Section

Provide a standby quantity of hot mix asphalt (HMA) and aggregate base at the job site equal to the quantity of pavement removed during the work shift for construction of a temporary roadway structural section. The temporary structural section must consist of a 0.3-foot-thick layer of HMA over aggregate base.

Spread and compact aggregate base and HMA by methods that will produce a well-compacted, uniform base, free from pockets of coarse or fine material and a surfacing of uniform smoothness, texture, and density. The aggregate base and the HMA may each be spread and compacted in one layer. The finished surface of the HMA must not vary more than 0.05 foot from the lower edge of a 12-foot straightedge placed parallel with the centerline and must match the elevation of the existing pavement and structure along the joints between the existing pavement and structure and the temporary surfacing.

Maintain the temporary structural section until you are able to construct and cure the approach slab with the prescribed time limit.

Removing Portions Of Existing Structures

Remove portions of the existing structure under "Existing Highway Facilities" of these special provisions.

Removing Existing Pavement And Base Materials

Sawcut full depth the outline of portland cement concrete to be removed with a power-driven concrete saw.

Cut the outlines of excavations in asphalt concrete on a neat line to a minimum depth of 0.25 foot with a power-driven concrete saw or wheel-type rock cutting excavator before any asphalt concrete material is removed. These excavations must be permanently or temporarily backfilled to conform to the grade of the adjacent pavement before opening the lane to public traffic. Surplus excavated material may be used as temporary backfill material.

Regardless of the type of equipment used to remove concrete within the sawed outline, do not use power impact tools within 1.5 feet of the pavement that is required to remain in place.

Uniformly grade and compact the existing base material remaining in place after removing the existing pavement and base materials to the required depth. The finished surface of the base material at any point must not extend above the grade approved by the Engineer.

Fill areas of base material that are low as a result of over excavation with structure approach slab concrete in the same operation that the new concrete is placed.

Where pavement subsealing has been performed under existing approach slabs, remove the full depth of subsealing material. Where removal of cement treated base is required to construct the approach slab, remove the full depth of the cement treated base.

Fill voids between the new structure approach slab and the base material remaining in place that are caused by removal of subsealing material or cement treated base with either aggregate base (approach slab) or structure approach slab concrete. If you choose to fill these voids with structure approach slab concrete, fill the voids in the same operation that the new concrete is placed.

Establish a grade line for the new approach slab that will provide a smooth profile grade. The profile grade will be subject to approval by the Engineer.

Aggregate Base (Approach Slab)

Spread and compact aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete by methods that will produce a well-compacted, uniform base, free from pockets of coarse or fine material to the grade approved by the Engineer. Where the required thickness of aggregate base is 8 inches or less, the base may be spread and compacted in one layer. Where the required thickness of aggregate base is more than 8 inches, the base must be spread and compacted in 2 or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 8 inches.

The finished surface of the base material at any point must not extend above the grade approved by the Engineer. Fill areas of base material that are lower than the grade approved by the Engineer with structure approach slab concrete in the same operation that the new concrete is placed.

Bonding Bar Reinforcement

Bond bar reinforcement or abutment tie rods in drilled holes under the provisions for drilling and bonding dowels in Section 83-2.02D(1), "General," of the Standard Specifications.

If reinforcement is encountered during drilling before the specified depth is attained, notify the Engineer. Unless the Engineer approves coring through the reinforcement, the hole will be rejected and a new hole must be drilled adjacent to the rejected hole to the depth shown on the plans.

Finishing Approach Slabs

Finish the top surface of the approach slab under the provisions for decks in Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications. The finished top surface must not vary more than 0.02 foot from the lower edge of a 12-foot straightedge placed parallel with the centerline. Edges of slabs must be edger finished. The provisions for deck crack treatment do not apply to Type R approach slabs.

The surface of the approach slab will not be profiled, and the Profile Index requirements do not apply.

Approach slab concrete shall be cured before the time the lane is to be opened to public traffic as specified in "Maintaining Traffic" of these special provisions.

Sealing Joints

Type AL joint seals must comply with Section 51-1.12F, "Sealed Joints," of the Standard Specifications. The sealant may be mixed by hand-held power-driven agitators and placed by hand methods.

The pourable seal between the steel angle and concrete barrier must comply with the requirements for Type A and AL seals in Section 51-1.12F(3), "Materials and Installation," of the Standard Specifications. The sealant may be mixed by hand-held power-driven agitators and placed by hand methods. Immediately before placing the seal, thoroughly clean the joint, including abrasive blast cleaning of the concrete surfaces, so that all foreign material and concrete spillage are removed from all joint surfaces. Joint surfaces must be dry at the time the seal is placed.

MEASUREMENT AND PAYMENT

Structural concrete, approach slab (Type R) will be measured and paid for in conformance with the provisions in Section 51-1.22, "Measurement," and Section 51-1.23, "Payment," of the Standard Specifications and these special provisions.

Full compensation for removing and disposing of portions of existing structures and pavement materials, and for furnishing and placing epoxy-coated materials, Type AL joint seals, and pourable seals shall be considered as included in the contract price paid per cubic yard for structural concrete, approach slab (Type R), and no separate payment will be made therefor.

The quantity of aggregate base (approach slab) to be paid for shall include the actual volume of aggregate base (approach slab) used to fill voids below the reinforced structure approach slab concrete, except for the volume of areas low as a result of over excavation. The volume to be paid for will be calculated on the basis of the constructed length, width, and thickness of the filled voids. Structure approach slab concrete used to fill voids lower than the approved grade of the base, except for the areas low as a result of over excavation, will be measured and paid for by the cubic yard as aggregate base (approach slab).

The contract price paid per cubic yard for aggregate base (approach slab) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing aggregate base (approach slab), complete in place, including excavation and removing and disposing of base and subsealing materials, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for furnishing, stockpiling, and disposing of standby material for construction of temporary structural sections; and for constructing, maintaining, removing, and disposing of temporary structural sections shall be considered as included in the contract price paid per cubic yard for structural concrete, approach slab (Type R), and no separate payment will be made therefor.

Full compensation for drilling and bonding of bar reinforcement or abutment tie rods shall be considered as included in the contract price paid per cubic yard for structural concrete, approach slab (Type R), and no separate payment will be made therefor.

Full compensation for constructing, testing, and removing trial slabs shall be considered as included in the contract price paid per cubic yard for structural concrete, approach slab (Type R), and no separate payment will be made therefor.

10-1.345 PAVING NOTCH EXTENSION

This work shall consist of extending existing paving notches in conformance with the details shown on the plans and these special provisions.

Concrete for the paving notch extensions at Bridge No.s 19-0042, 19-0023 and 19-0024 shall conform to the provisions for structure approach slab concrete of these special provisions.

At least 12 hours shall elapse between the time of placing concrete for the paving notch extension and placing concrete for the structure approach slab.

The below paragraphs apply to paving notch extension at Bridge No. 19-0094 only .

Concrete for paving notch extension shall be a high-strength material consisting of either magnesium phosphate concrete, modified high alumina based concrete, or portland cement based concrete. Magnesium phosphate concrete shall conform to the provisions for magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications and these special provisions. Modified high alumina based concrete and portland cement based concrete shall be water activated and shall conform to the provisions for single component (water activated) magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications and these special provisions.

At least one hour shall elapse between the time of placing concrete for the paving notch extension and placing concrete for the structure approach slab.

A clean, uniform, rounded aggregate filler may be used to extend the concrete. The moisture content of the aggregate shall not exceed 0.5 percent. Grading of the aggregate shall conform to the following:

Sieve Sizes	Percentage Passing
1/2"	100
No. 16	0-5

The amount of aggregate filler shall conform to the manufacturer's recommendation, but in no case shall the concrete strengths be less than that specified for magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications.

The components of dual component (with a prepackaged liquid activator) magnesium phosphate shall be combined by mixing complete units supplied by the manufacturer. Portions of units shall not be used. Water shall not be added to dual component magnesium phosphate.

Magnesium phosphate concrete shall not be mixed in containers or worked with tools containing zinc, cadmium, aluminum or copper. Modified high alumina based concrete shall not be mixed in containers or worked with tools containing aluminum.

Concrete shall not be retempered. Finishing tools that are cleaned with water shall be thoroughly dried before working the concrete.

When placing concrete on slopes exceeding 5 percent, the Engineer may require the Contractor to provide a flow controlled modified material.

Modified high alumina based concrete and portland cement based concrete shall be cured in conformance with the provisions in Section 90-7.01B, "Curing Compound Method," of the Standard Specifications. Magnesium phosphate concrete shall not be cured.

The surface temperature of the areas to receive the concrete shall be 40° F or above when the concrete is placed. The contact surface to receive the magnesium phosphate concrete shall be dry. The contact surfaces to receive the modified high alumina concrete or portland cement based concrete may be damp but not saturated.

The below paragraphs apply to paving notch extension at Bridge No.s 19-0094, 19-0042, 19-0023 and 19-0024 .

The construction joint between the paving notch extension and the existing abutment shall conform to the provisions for horizontal construction joints in Section 51-1.13, "Bonding," of the Standard Specifications. Concrete shall be placed in the spalled portions of the existing paving notch concurrently with the concrete for the paving notch extension.

Attention is directed to "Reinforcement" of these special provisions.

Structure excavation and backfill shall conform to the provisions in Section 19-3, "Structure Excavation and Backfill," of the Standard Specifications, except for payment.

Drilling of holes and bonding of reinforcing steel dowels shall conform to the provisions for drilling and bonding dowels in Section 83-2.02D(1), "General," of the Standard Specifications. If reinforcement is encountered during drilling before the specified depth is attained, the Engineer shall be notified. Unless the Engineer approves coring through the reinforcement, the hole will be rejected and a new hole, in which reinforcement is not encountered, shall be drilled adjacent to the rejected hole to the depth shown on the plans.

The quantity of concrete for paving notch extension will be measured by the cubic foot.

The contract price paid per cubic foot for paving notch extension shall include full compensation for furnishing all labor, materials (including concrete for the paving notch spalled areas), tools, equipment, and incidentals, and for doing all the work involved in constructing the paving notch extension, complete in place, including structure excavation and backfill, reinforcement, and drilling and bonding dowels, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.40 POLYESTER CONCRETE OVERLAY

GENERAL

Summary

This work includes placing a polyester concrete overlay with a high molecular weight methacrylate (HMWM) resin prime coat to bridge decks.

Submittals

Submit an overlay placement plan for all bridges with polyester concrete overlay and a public safety plan only for Bridge No.s 19-0134 and 19-0150 under Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The plan review time will be 15 days.

The overlay placement plan must include:

1. Schedule of overlay work and testing for each bridge
2. Description of equipment for applying HMWM resin
3. Description of equipment for measuring, mixing, placing, and finishing polyester concrete overlay
4. Method for isolating expansion joints
5. Cure time for polyester concrete
6. Description of equipment for applying sand
7. Storage and handling of HMWM resin and polyester concrete components
8. Disposal of excess HMWM resin, polyester concrete, and containers

The public safety plan must include details for:

1. A public notification letter with a list of delivery and posting addresses. The letter must state overlay work locations, dates, times, and what to expect. Deliver the letter to residences and businesses within 100 feet of overlay work and to local fire and police officials at least 7 days before starting work. Post the letter at the job site.
2. An airborne emissions monitoring plan prepared and executed by a certified industrial hygienist (CIH) certified in comprehensive practice by the American Board of Industrial Hygiene. The plan must have at least 4 monitoring points including the mixing point, application point, and point of nearest public contact. Monitor airborne emissions during overlay work and submit emissions monitoring results after completing the work.
3. An action plan for protection of the public when airborne emissions levels exceed permissible levels.
4. A copy of the CIH's certification.

Submit a material safety data sheet for each shipment of HMWM and polyester resin components before use.

Quality Control and Assurance

Submit samples of HMWM and polyester resins 15 days before use under Section 6-3, "Testing," of the Standard Specifications. Notify the Engineer 15 days before delivery of resin in containers over 55 gallons to the job site.

Complete a trial overlay before starting work. Results from airborne emissions monitoring of the trial overlay must be submitted to the Engineer before starting production work.

The trial overlay must:

1. Be at least 12 feet wide by 6 feet long and the same thickness as the project overlay
2. Be constructed on a prepared concrete base
3. Be placed within the project limits at an approved location
4. Be constructed using the same equipment as the production work
5. Replicate field conditions for the production work
6. Determine the initial polyester concrete set time
7. Demonstrate suitability of the proposed means and methods
8. Demonstrate suitability of the airborne emissions monitoring plan
9. Be disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications

MATERIALS

Polyester concrete consists of polyester resin binder and aggregate.

Polyester resin binder must:

1. Be an unsaturated isophthalic polyester-styrene co-polymer.
2. Contain at least 1 percent by weight gamma-methacryloxypropyltrimethoxysilane, an organosilane ester silane coupler.
3. Be used with a promoter compatible with suitable methyl ethyl ketone peroxide and cumene hydroperoxide initiators.
4. Comply with the following:

Polyester Resin Binder

Property	Requirement	Test Method
Viscosity *	75 to 200 cP (RVT, No. 1 Spindle, 20 RPM at 77°F)	ASTM D 2196
Specific Gravity *	1.05 to 1.10 at 77°F	ASTM D 1475
Elongation	35 percent, minimum Type I at 0.45 inch/min. Thickness = 0.25 ± 0.03 inch	ASTM D 638
	Sample Conditioning: 18/25/50 + 5/70	ASTM D 618
Tensile Strength	2500 psi, minimum Type I at 0.45 inch/min. Thickness = 0.25 ± 0.03 inch	ASTM D 638
	Sample Conditioning: 18/25/50 + 5/70	ASTM D 618
Styrene Content *	40 percent to 50 percent by weight	ASTM D 2369
PCC Saturated Surface-Dry Bond Strength	3.5 MPa, minimum, at 24 hours and 21° ± 1°C	California Test 551
Static Volatile Emission *	60 gram per square meter, loss, maximum	SCAQMD Method 309-91

*Test must be performed before adding initiator.

Aggregate for polyester concrete must:

1. Comply with Section 90-2.02, "Aggregates," of the Standard Specifications
2. Have at most 45 percent crushed particles retained on the No. 8 sieve when tested under California Test 205
3. Have fine aggregate consisting of natural sand
4. Have a weighted average aggregate absorption of at most 1 percent when tested under California Tests 206 and 207
5. At the time of mixing with resin, have a moisture content of at most one half of the weighted average aggregate absorption when tested under California Test 226
6. Comply with one of the following aggregate gradings:

Combined Aggregate Grading

Sieve Size	Percentage Passing	
	3/8 inch Maximum	No. 4 Maximum
1/2 inch	100	100
3/8 inch	83 - 100	100
No. 4	65 - 82	62 - 85
No. 8	45 - 64	45 - 67
No. 16	27 - 48	29 - 50
No. 30	12 - 30	16 - 36
No. 50	6 - 17	5 - 20
No. 100	0 - 7	0 - 7
No. 200	0 - 3	0 - 3

HMWM resin prime coat consists of a resin, promoter, and initiator. HMWM resin must:

1. Be low odor and wax-free
2. Comply with the following:

Methacrylate Resin

Property	Requirement	Test Method
Volatile Content *	30 percent, maximum	ASTM D 2369
Viscosity *	25 cP, maximum, (Brookfield RVT with UL adaptor, 50 RPM at 77°F)	ASTM D 2196
Specific Gravity *	0.90 minimum, at 77°F	ASTM D 1475
Flash Point *	180°F, minimum	ASTM D 3278
Vapor Pressure *	1.0 mm Hg, maximum, at 77°F	ASTM D 323
PCC Saturated Surface-Dry Bond Strength	3.5 MPa, minimum at 24 hours and 21 ± 1°C	California Test 551

*Test must be performed before adding initiator.

Sand for abrasive sand finish must:

1. Be commercial quality blast sand
2. Have at least 95 percent pass the No. 8 sieve and at least 95 percent retained on the No. 20 sieve when tested under California Test 205
3. Have an average absorption of at most 1 percent when tested under California Test 207

CONSTRUCTION

Use a continuous mixer to mix polyester concrete. The continuous mixer must:

1. Employ an auger screw/chute device.
2. Be equipped with an automatic metering device that measures and records aggregate and resin volumes. Record volumes at least every 5 minutes, including time and date. Submit recorded volumes at the end of the work shift.
3. Have a visible readout gage that displays volumes of aggregate and resin being recorded.
4. Be certified under California Test 109 before use.
5. Produce a satisfactory mix consistently during a demonstration.

Polyester concrete may be mixed in mechanical mixers of at most 9 cubic feet capacity.

Finishing equipment for polyester concrete must:

1. Have grade control capabilities
2. Be used to consolidate the polyester concrete

The Engineer will provide final grade and cross slope before the start of overlay work.

The Engineer may (1) test existing deck surfaces for smoothness under Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications, and (2) require the deck smoothness be modified under Section 42-2, "Grinding," of the Standard Specifications.

Prepare the deck under "Prepare Concrete Bridge Deck Surface," "Remove Unsound Concrete," and "Rapid Setting Concrete Patches" of these special provisions.

The deck must be dry before placing the HMWM prime coat. The concrete surface must be at least 50 degrees F and at most 100 degrees F. Relative humidity must be at most 85 percent.

Sweep the deck. Blow the deck clean with compressed air.

Thoroughly mix all components of HMWM resin prime coat. Apply the HMWM resin to the deck surface:

1. Within 5 minutes of mixing
2. At a rate of approximately 55 sq ft per gallon
3. Uniformly and spread to completely cover surfaces to be overlaid

Place the HMWM prime coat on magnesium phosphate concrete no sooner than 72 hours after final set or on modified high alumina based concrete no sooner than 30 minutes after final set.

Initiate the polyester resin binder and blend completely. Add aggregate and mix for at least 2 minutes.

Place the polyester concrete:

1. Immediately after applying the HMWM prime coat
2. Before gelling
3. Within 15 minutes of adding initiator

The resin binder must weigh approximately 12 percent of the weight of the aggregate. The Engineer will determine the exact percentage. Polyester concrete must have an initial set time of at least 30 minutes and at most 120 minutes when tested using an initial-setting time Gillmore needle under ASTM C 266.

Consolidate and finish the overlay to the required grade and cross section using finishing equipment. Polyester concrete must be consolidated to a relative compaction of at least 97 percent when tested under California Test 552.

Apply a sand finish of at least 0.8 lbs per sq yd before gelling occurs.

Protect the overlay from moisture for at least 4 hours after finishing. Allow traffic or equipment on the overlay no sooner than 4 hours after final finishing.

Completed polyester concrete deck surfaces must comply with Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications.

Taper polyester concrete overlay edges if the overlay is not completed within the allowable lane closure time and is more than 1/2 inch higher in elevation than the adjacent pavement. Taper edges transverse to the direction of traffic at a 20:1 (horizontal:vertical) slope. Taper edges longitudinal to the direction of traffic at a 4:1 (horizontal:vertical) slope. Tapers may remain and be overlaid with polyester concrete overlay.

MEASUREMENT AND PAYMENT

Furnish polyester concrete overlay will be measured and paid for by the cubic foot. The volume to be paid for will be determined based on the quantity of resin binder used, the percent by weight of resin binder in the polyester concrete, and a unit weight of 135 lb per cu ft. The payment quantity shall be the calculated quantity of polyester concrete overlay used in the work, except material used in trial overlays and wasted or unused material. When the plans show that unsound concrete patching material is polyester overlay, the payment quantity will include the patches.

Place polyester concrete overlay will be measured and paid for by the square foot. The area to be paid for will be based on the plan dimensions.

The contract price paid per cubic foot for furnish polyester concrete overlay shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing polyester concrete, including furnishing HMWM resin prime coat and materials for trial overlays, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as ordered by the Engineer.

The contract price paid per square foot for place polyester concrete overlay shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the polyester concrete overlay, complete in place, including application of HMWM prime coat and constructing and disposing of trial overlays and base, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as ordered by the Engineer.

Public safety plan for Bridge No.s 19-0134 and 19-0150 will be paid for on the basis of a lump sum price.

The contract lump sum price paid for public safety plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including the public action plan and airborne emissions monitoring work performed by the CIH, notification of the public, and reporting test results, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Modifications to existing bridge deck smoothness will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

10-1.405 RAPID SETTING CONCRETE PATCHES

This work shall consist of cleaning the surfaces and furnishing, placing, and finishing concrete patches. Concrete patches shall be placed in conformance with the details shown on the plans, the provisions of the Standard Specifications, and these special provisions.

The concrete material shall be a high-strength material consisting of either magnesium phosphate concrete, modified high alumina based concrete or portland cement based concrete. Magnesium phosphate concrete shall conform to the requirements for magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications and these special provisions. Modified high alumina based concrete and portland cement based concrete shall be water activated and shall conform to the requirements for single component (water activated) magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications and these special provisions.

A clean uniform rounded aggregate filler may be used to extend the concrete. The moisture content of the aggregate shall not exceed 0.5 percent. Grading of the aggregate shall conform to the following:

Sieve Size	Percentage Passing
1/2"	100
No. 16	0-5

The amount of aggregate filler shall conform to the manufacturer's recommendations, but in no case shall the concrete strengths be less than that specified for magnesium phosphate concrete in Section 83-2.02D(1), "General," of the Standard Specifications.

Mixing of components of dual component (with a prepackaged liquid activator) magnesium phosphate shall be by complete units, supplied by the manufacturer. Portions of units shall not be used. Water shall not be added to dual component magnesium phosphate.

Cleaning the contact surfaces of existing concrete shall be accomplished by abrasive blast cleaning the concrete and exposed reinforcing steel, as necessary, to remove all rust, paint, grease, asphalt or other foreign materials. A minimum of 1/8 inch of concrete shall be removed. Immediately prior to applying the new concrete, the surfaces shall be recleaned by sweeping and pressure jetting, or by other approved means, as necessary to remove debris which has accumulated during construction or after abrasive blast cleaning. The surface temperature of the areas to be covered shall be 39° F or above when the concrete is applied. Methods proposed to heat said surfaces are subject to approval by the Engineer. The contact surface for the magnesium phosphate concrete shall be dry. The contact surfaces for modified high alumina based concrete or portland cement based concrete may be damp but not saturated.

Magnesium phosphate concrete shall not be mixed in containers or worked with tools containing zinc, cadmium, aluminum or copper. Modified high alumina based concrete shall not be mixed in containers or worked with tools containing aluminum.

Concrete shall not be retempered. Finishing tools that are cleaned with water shall be thoroughly dried before working the concrete.

When placing concrete on slopes exceeding 5 percent, the Engineer may require the Contractor to provide a flow controlled modified material.

Modified high alumina based concrete and portland cement based concrete shall be cured in conformance with the provisions in Section 90-7.01B, "Curing Compound Method," of the Standard Specifications. Magnesium phosphate concrete shall not be cured.

Unless otherwise permitted in writing by the Engineer, public traffic shall not be permitted on the new concrete until at least one hour after final set.

Rapid setting concrete (patch) will be measured and paid for by the cubic foot.

The quantities of rapid setting concrete (patch), in cubic feet, to be paid for will be determined from the total number of pounds of concrete actually used in the patch divided by a plastic density of 135 pounds per cubic foot. Wasted or unused concrete will not be included. The number of pounds of concrete, with or without aggregate filler, will be determined from scale weights.

The contract price paid per cubic foot for rapid setting concrete (patch) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing concrete patches, including cleaning contact surfaces, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.41 REINFORCEMENT

Reinforcement shall conform to the provisions in Section 52, "Reinforcement," of the Standard Specifications and these special provisions.

The provisions in "Welding Quality Control" of these special provisions do not apply to resistance butt welding.

When joining new reinforcing bars to existing reinforcement, sample splices shall be made using only the deformation pattern of the new reinforcement to be spliced.

All new longitudinal and transverse bar reinforcement in the wingwalls being rebuilt at Bridge No.s 19-0023, 19-0024 and 19-0042, shall be epoxy coated in conformance with the requirements of Section 52-1.02B, "Epoxy-coated Reinforcement," of the standard specifications.

MEASUREMENT AND PAYMENT

Measurement and payment for reinforcement in structures shall conform to the provisions in Section 52-1.10, "Measurement," and Section 52-1.11, "Payment," of the Standard Specifications and these special provisions.

Full compensation for drilling holes, including coring through reinforcement when approved by the Engineer, and bonding dowels shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge and no separate payment will be made therefor.

Full compensation for coating epoxy-coated bar reinforcing steel as specified shall be considered as included in the contract price paid per pound for the bar reinforcing steel involved and no additional compensation will be allowed therefor.

BID ITEM LIST**03-3E0904**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	070012	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	LUMP SUM	LUMP SUM	
2	070018	TIME-RELATED OVERHEAD	WDAY	120		
3	071325	TEMPORARY FENCE (TYPE ESA)	LF	600		
4	074016	CONSTRUCTION SITE MANAGEMENT	LS	LUMP SUM	LUMP SUM	
5	074017	PREPARE WATER POLLUTION CONTROL PROGRAM	LS	LUMP SUM	LUMP SUM	
6	074032	TEMPORARY CONCRETE WASHOUT FACILITY	EA	3		
7	074038	TEMPORARY DRAINAGE INLET PROTECTION	EA	4		
8	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
9	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
10	120151	TEMPORARY TRAFFIC STRIPE (TAPE)	LF	175,000		
11	120199	TRAFFIC PLASTIC DRUM	EA	870		
12	120300	TEMPORARY PAVEMENT MARKER	EA	2,670		
13	128650	PORTABLE CHANGEABLE MESSAGE SIGN	LS	LUMP SUM	LUMP SUM	
14	129000	TEMPORARY RAILING (TYPE K)	LF	23,600		
15	129100	TEMPORARY CRASH CUSHION MODULE	EA	340		
16	141103	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	LF	860		
17	150615	REMOVE ENTRANCE TAPER	EA	3		
18	150662	REMOVE METAL BEAM GUARD RAILING	LF	1,460		
19	150714	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	3,030		
20	150857	REMOVE ASPHALT CONCRETE SURFACING	SQFT	61,748		

BID ITEM LIST**03-3E0904**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	152430	ADJUST INLET	EA	4		
22	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	58,100		
23	153225	PREPARE CONCRETE BRIDGE DECK SURFACE	SQFT	190,804		
24	042889	BRIDGE REMOVAL (PORTION) (BACKWALL)	CF	64		
25	157561	BRIDGE REMOVAL (PORTION), LOCATION A	LS	LUMP SUM	LUMP SUM	
26	157562	BRIDGE REMOVAL (PORTION), LOCATION B	LS	LUMP SUM	LUMP SUM	
27	157563	BRIDGE REMOVAL (PORTION), LOCATION C	LS	LUMP SUM	LUMP SUM	
28	190101	ROADWAY EXCAVATION	CY	11,300		
29	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	
30	BLANK					
31	203031	EROSION CONTROL (HYDROSEED) (SQFT)	SQFT	52,600		
32	260201	CLASS 2 AGGREGATE BASE	CY	7,110		
33	260210	AGGREGATE BASE (APPROACH SLAB)	CY	123		
34	390132	HOT MIX ASPHALT (TYPE A)	TON	7,900		
35	390138	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)	TON	2,810		
36	394050	RUMBLE STRIP	STA	190		
37	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	470		
38	394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	63		
39	394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	150		
40	394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	920		

BID ITEM LIST**03-3E0904**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	12		
42	397005	TACK COAT	TON	18		
43	510053	STRUCTURAL CONCRETE, BRIDGE	CF	648		
44	510087	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY	1,249		
45	511118	CLEAN EXPANSION JOINT	LF	224		
46	511130	INJECT CRACK (EPOXY)	LF	150		
47	515028	REPAIR SPALLED SURFACE AREA	SQFT	3		
48	515041	FURNISH POLYESTER CONCRETE OVERLAY	CF	11,921		
49 (F)	515042	PLACE POLYESTER CONCRETE OVERLAY	SQFT	190,804		
50 (F)	515050	GRIND BRIDGE DECK	SQFT	1,361		
51	519078	SNOWPLOW DEFLECTOR	EA	52		
52	519088	JOINT SEAL (MR 1")	LF	1,412		
53	BLANK					
54 (F)	520102	BAR REINFORCING STEEL (BRIDGE)	LB	3,558		
55	820108	DELINEATOR (CLASS 2)	EA	9		
56	820110	MILEPOST MARKER	EA	6		
57	820151	OBJECT MARKER (TYPE L-1)	EA	4		
58	832001	METAL BEAM GUARD RAILING	LF	1,260		
59	839541	TRANSITION RAILING (TYPE WB)	EA	6		
60	839581	END ANCHOR ASSEMBLY (TYPE SFT)	EA	2		

BID ITEM LIST
03-3E0904

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
61	BLANK					
62	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	2		
63 (F)	839718	CONCRETE BARRIER (TYPE 732R)	LF	1,184		
64	840504	4" THERMOPLASTIC TRAFFIC STRIPE	LF	28,300		
65	840505	6" THERMOPLASTIC TRAFFIC STRIPE	LF	630		
66	840506	8" THERMOPLASTIC TRAFFIC STRIPE	LF	970		
67	840508	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	LF	1,000		
68	840515	THERMOPLASTIC PAVEMENT MARKING	SQFT	84		
69	840525	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	LF	27,000		
70	850101	PAVEMENT MARKER (NON-REFLECTIVE)	EA	910		
71	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	280		
72	850122	PAVEMENT MARKER (RETROREFLECTIVE-RECESSED)	EA	770		
73	BLANK					
74	020486	TEMPORARY CRASH CUSHION (TYPE ABSORB 350)	EA	20		
75	151270	SALVAGE METAL BRIDGE RAILING	LF	1,183		
76	153223	REMOVE UNSOUND CONCRETE	CF	25		
77	157564	BRIDGE REMOVAL (PORTION), LOCATION D	LS	LUMP SUM	LUMP SUM	
78	192003	STRUCTURE EXCAVATION (BRIDGE)	CF	768		
79	193003	STRUCTURE BACKFILL (BRIDGE)	CF	752		
80	510800	PAVING NOTCH EXTENSION	CF	942		

BID ITEM LIST
03-3E0904

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81	511124	RAPID SETTING CONCRETE (PATCH)	CF	25		
82	519081	JOINT SEAL (MR 1/2")	LF	227		
83	519100	JOINT SEAL (MR 2")	LF	85		
84	043081	PUBLIC SAFETY PLAN	LS	LUMP SUM	LUMP SUM	
85	839483	CONCRETE BARRIER (TYPE 50A)	LF	283		
86	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID:

\$ _____