DEPARTMENT OF TRANSPORTATION
DES-OE MS #43
1727 30TH Street, 2ND Floor
Sacramento, CA 95816

December 28, 2001

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN DIEGO COUNTY AT VARIOUS LOCATIONS.

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 January 24, 2002, instead of January 10, 2002.

This addendum is being issued to set a new bid opening date as shown herein and to revise the Project Plans, the Notice to Contractors and Special Provisions, the Proposal and Contract, and the Federal Minimum Wages with Modification Number 13 dated 12-14-01. A copy of the modified wage rates are available for the contractor's use on the Internet Site:

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

Project Plan Sheets 2, 8, 16, 19, 20, 25, 32, 33, 39, 51, 178, 230, 231, 240, 243, 249, 251, 252, 253, 255, 265, 267, 279, 280, 282, 290, 291, 292, 293, 317, 318, 321, 324, 347, 348, 352, 353, 356, 364, 365, 366, 386, 388, 442, 446, 482, 509, 515, 517, 519, 538 to 546, 593, 596, 597, 721, 788, 793, 940, 1030, 1335, 1440, 1528, 1537, and 1543 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheet 1507A is added. Half-sized copy of the added sheet is attached for addition to the project plans.

Project Plan Sheets: All references to Retaining Wall 470 throughout the project are deleted.

Project Plan Sheet 418 the call out for "RELOCATE WATER METER" revised to "WATER METER (BUILDING)."

Project Plan Sheet 880 and 905 add the following as a General Note:

"For alignment of concrete barrier and retaining wall see layout sheet L-6."

Project Plan Sheet 902 is revised as follows:

"At Station 459+80 "A" on the east side, delete the CB box note from the pull box between conduit run 5 and conduit "TMS" and from the pull box between Conduit Run 4 and conduit "TMS"."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

Project Plan Sheet 908 is revised as follows:

"At Station 11+10 "G" delete the CB box note beside box notes 3 and 4."

Project Plan Sheet 911 is revised as follows:

"At Station 519+00 "R-2M" delete the CB box note from the pull box between conduit run 6 and conduit "TMS"."

Project Plan Sheet 918 is revised as follows:

"At Station 2+50 "CMR", on the south side, delete the CB box note from the pull box between conduit "RM" and conduit run 5."

Project Plan Sheet 919 is revised as follows:

"At Station 545+20 "NB" delete the CB box note from the pull box between conduit with box note 2 and conduit run 4."

At Station 545+40 "NB" delete the CB box note from the pull box between conduit with box note 2 and conduit run 15.

At Station 4+00 "CMR", on the south side, delete the CB box note from the pull box between conduit runs 3, 5 and conduit "SL"."

Project Plan Sheet 920 is revised as follows:

"At Station 547+20 "CM4" delete the CB box note from the pull box between conduit "CMS" and conduit run 4 and from the pull box between conduit "CMS" and conduit run 3."

At Station 548+20 "CM1" delete the CB box note from the pull box between conduit "RM" and conduit run 5 and from the pull box between conduit "RM" and conduit run 6."

Project Plan Sheets: 900, 901, 904, 905, 906, 914, 915, 916, 917, 918, 922, 923 have the following note added:

"Install 0.5 kVA 480/120 V XFMR with 1.0 A primary fuse in sign enclosure. Enclosure shall be sized appropriately for XFMR and SC4A control."

Project Plan Sheets: 904, 914, 916, 917, 918, 921 have the following note added:

"Install 0.75 kVA 480/120 V XFMR with 2.0 A primary fuse in sign enclosure. Enclosure shall be sized appropriately for XFMR and SC4A control."

Project Plan Sheet 933 is revised as follows:

"Add one pull box (No. 9A) into conduit number 1 at Sta +49.00."

Project Plan Sheets 678, 679, 721 766, 767, 769, 770, 771, 772, 773, and 774 are deleted.

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, all references to Retaining Wall 470 are deleted.

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES," the fifth paragraph is revised as follows:

"The Contractor shall diligently prosecute all work (including plant establishment) to completion before the expiration of **1350 WORKING DAYS** beginning on the fifteenth calendar day after approval of the contract."

In the Special Provisions, Section 5-1.14, "BIOLOGIST," in the second and fifth paragraphs, the number of days for the Contractor to notify the Engineer are revised from "10 days" to "15 days" and "2 days" to "15 working days", respectively.

In the Special Provisions, Section 5-1.18, "AREAS FOR CONTRACTOR'S USE," the following paragraph is added after the first paragraph:

"Areas available for the exclusive use of the Contractor are designated on the plans. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk, and the State shall not be held liable for damage to or loss of materials or equipment located within these areas."

In the Special Provisions, Section 5-1.19, "PAYMENTS," in the second paragraph, item C is revised as follows:

"C. Progress Schedule (Critical Path Method) $150,000.00."

In the Special Provisions, Section 5-1.20, "SOUND CONTROL REQUIREMENTS," in the second paragraph, the first sentence is revised as follows:

"The noise level from the Contractor's operations, left of I-5, "SD" Line from Station 559+00 to Station 574+00 and right of State Route 56/Carmel Valley Road, "CVR" Line, from Station 560+00 to Station 562+20 between the hours of 7:00 p.m. and 7:00 a.m., shall not exceed 80 dbA at a distance of 15 m."

In the Special Provisions, Section 5-1.24, "AERIALLY DEPOSITED LEAD," in the third paragraph, the first sentence is deleted.

In the Special Provisions, Section 6, "INCENTIVES AND DISINCENTIVES FOR COMPLETION OF WORK," under subsection, "DESIGNATED PORTION OF WORK," item B is revised as follows:

"B. Retaining Walls 456, 466, 512, 516, 524, 544 and 546."

In the Special Provisions, Section 6, "INCENTIVES AND DISINCENTIVES FOR COMPLETION OF WORK," under subsection, "INCENTIVE AND DISINCENTIVE," the third paragraph is revised as follows:

"Contractual obligations required by the Engineer such as performing normal inspection, testing, and review duties to complete the northbound Interstate 5 work shall be considered as included in the 900 working days for the completion of that portion of the contract and no extensions of time will be allowed for such action in determining incentive payments or disincentive deductions."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the table under the third paragraph is revised as follows:

Parcel Number	Clearance Date
30846	03/30/2002
31222-24	03/30/2002
31026-35	03/30/2002
31199	03/30/2002
26982	03/30/2002
31331	03/30/2002

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the sixth and seventh paragraphs are revised as follows:

"As one of the first orders of work the Contractor shall complete the grading, irrigation and planting of the Mitigation Site, as shown on the plans, the site shall be constructed between September 1st, and February 15th. Nonconflicting work may proceed concurrently with the construction of the Mitigation Site provided progress is maintained adequately to assure completion of the Mitigation Site within the time limits given. In the event satisfactory progress is not maintained, the Engineer may order suspension of such nonconflicting work.

The Contractor shall perform no construction work west of I-5 between February 15th and September 1st between Carmel Valley Road and 122 meters south of Carmel Valley Creek."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the fourteenth paragraph is revised as follows:

"The Contractor shall notify the Engineer 15 working days prior to commencing any ground disturbing activities in and near Los Pensaquitos Creek, Carmel Creek and the Mitigation site. All such work shall be performed in the presence of State appointed Biologist.

Cut slopes, over 30 meters high east of I-5, shall be planted within one year of slope disturbance."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the twenty-first paragraph is revised as follows:

"Attention is directed to "Progress Schedule (Critical Path Method)" of these special provisions regarding the Pre-Construction Scheduling Conference within 10 days after approval of the contract."

In the Special Provisions, Section 10-1.14, "PROGRESS SCHEDULE (CRITICAL PATH METHOD)," is revised as attached.

In the Special Provisions, Section 10-1.155 "ELECTRONIC MOBILE DAILY DIARY SYSTEM DATA DELIVERY," is added as attached.

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-1.16, "OBSTRUCTIONS," the third table is revised and the following paragraph is added:

Utility	Location	Date	Utility Work
SDG&E Under Built O/H electric	"U-12", Roselle St., Route 5 O.C.	12/31/01	Temporary O/H Relocation
SDG&E 150 mm gas	"U-20 & 21" Perpendicular to "SD" line Sta. 540+68	03/20/01	Cap/Abandon
TWC U/G Television	N/B off Ramp and S/B on Ramp	12/31/01	Relocate Boxes
SDG&E U/G electric	"U-30", "CVR" line Sta. 561+20 to 562+80	12/31/01	Construct vault and relocate U/G electric and splice cables & remove vault
SDG&E O/H Electric	"U-18-20," West of "CM3" Line Station 539+00 and East of "NB" Line, Station 536+00 to 539+20 "U-20 & 22" West of "CM3" Line Station 539+00 to 543+85 "U-24 26", West of "CM3" Line Station 543+85 to Left "SB" Line, Station 550+00.	4/30/2002	Temporary O/H Relocations

"The Utility working Days will not begin until both the Notification and Site Preparations requirements have been met."

In the Special Provisions, Section 10-1.16, "OBSTRUCTIONS," the fourth table after the eighth paragraph is revised as attached.

In the Special Provisions, Section 10-1.21, "MAINTAINING TRAFFIC," the tables under the fourth paragraph are replaced as attached.

In the Special Provisions, Section 10-1.21, "MAINTAINING TRAFFIC," lane requirement charts numbered 7, 7A, 8, 9, 9A, 10, 11, 12, 14, 20 to 26A, 32, 32A, 34, 34A, 36, 37, 39, 43, 45 to 48, are revised as attached, lane requirement charts numbered 26B, 26C, 26D, 26E, 26F, and 34B are added as attached.

In the Special Provisions, Section 10-1.33, "EXISTING HIGHWAY FACILITIES," the following two paragraphs are added after the third paragraph:

"Plans of the existing bridges may be requested by fax from the Office of Structure Maintenance and Investigation, 1801 30th Street Sacramento, CA, Fax (916) 227-8357, and are available at the Office of Structure Maintenance and Investigations, Norwalk, CA, (562) 868-3828.

Plans of the existing bridges available to the Contractor are reproductions of the original contract plans with significant changes noted and working drawings and do not necessarily show normal construction tolerances and variances. Where dimensions of new construction required by this contract are dependent on the dimensions of the existing bridges the Contractor shall verify the controlling field dimensions and shall be responsible for adjusting dimensions of the work to fit existing conditions."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-1.36, "EARTHWORK," the fourth paragraph is deleted.

In the Special Provisions, Section 10-1.36, "EARTHWORK," in the table for "EARTH RETAINING STRUCTURE NUMBER 527," the surcharge height, is revised from "N/A" to "2".

In the Special Provisions, Section 10-1.39 "PLANTABLE GEOSYNTHETIC REINFORCED WALL," under subsection "MATERIALS," under the requirement number 1 under the subtitle "High Tenacity Polyester Encapsulated," is revised as follows:

"1. High tenacity polyester yarn shall conform to the requirements of ASTM Designation: D 629. In addition to conforming to the requirements for geosynthetic, geogrid, the material shall be encapsulated in an acrylic latex coating or polyvinyl chloride coating; shall be sheathed in polyethylene; or shall be polyvinyl chloride impregnated."

In the Special Provisions, Section 10-1.39 "PLANTABLE GEOSYNTHETIC REINFORCED WALL," under subsection "EARTHWORK," the two tables after the first paragraph are revised as follows:

Gradation Requirements		
Sieve Size	Percentage Passing	California Test
159-mm	100	202
75-mm	78 – 100	202
4.75-mm	----	202
600-µm	0 – 60	202
75-µm	0 – 25	202

Property Requirements		
Test	Requirement	California Test
Sand Equivalent	12 min.	217
Plasticity Index	10 max.	204
pH	6 to 9	643

If 12 percent or less passes the No. 75-µm sieve and 50 percent or less passes the No. 4.75-mm sieve, the Sand Equivalent and Plasticity Index requirements shall not apply.

In the Special Provisions, Section 10-1.39 "PLANTABLE GEOSYNTHETIC REINFORCED WALL," under subsection "EARTHWORK," the first sentence of the first paragraph is deleted and the second paragraph is deleted.

In the Special Provisions, Section 10-1.39 "PLANTABLE GEOSYNTHETIC REINFORCED WALL," under subsection "PRECAST CONCRETE WALL FACE," the second paragraph is revised as follows:

"Wall face members shall consist of a series of precast reinforced concrete headers and stretchers. Precast concrete elements shall be colored in conformance with section 72-6.03, "Materials", of the Standard Specifications to closely match Color No. 23531 of the Federal Standard 595B after curing and when air dry to simulate the appearance of earth."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-1.42, "PREFABRICATED VERTICAL DRAIN," is revised as attached.

In the Special Provisions, Section 10-1.53. "CONCRETE PAVEMENT (WITH DOWELED TRANSVERSE WEAKENED PLANE JOINTS)," under subsection "MATERIALS," the following subsection "Joint Filler Material," is added after the subtitle "Backer Rods," as follows:

"Joint Filler Material"

"Joint filler material shall be preformed expansion joint filler for concrete (bituminous type), conforming to the requirement of ASTM Designation: D 994."

In the Special Provisions, Section 10-1.53. "CONCRETE PAVEMENT (WITH DOWELED TRANSVERSE WEAKENED PLANE JOINTS)," subsection "CONSTRUCTING LONGITUDINAL ISOLATION JOINTS," is added after subsection "CONSTRUCTING TRANSVERSE CONTACT JOINTS," as follows:

"CONSTRUCTING LONGITUDINAL ISOLATION JOINTS"

"Prior to placing concrete, joint filler material shall be placed as shown on the plans. The joint filler shall be secured to the face of the existing pavement joint face by a method that will hold the joint filler in place during placement of concrete.

Sealant for longitudinal isolation joint shall be silicone joint sealant and placed in accordance with the requirements for liquid joint sealant installation as specified above, except references to backer rods shall not apply."

In the Special Provisions, Section 10-1.53. "CONCRETE PAVEMENT (WITH DOWELED TRANSVERSE WEAKENED PLANE JOINTS)," under subsection "MEASUREMENT AND PAYMENT," the first paragraph is replaced with the following two paragraphs as follows:

"Sealing longitudinal and transverse weakened plane joints, and longitudinal isolation joints in portland cement concrete pavement will be measured by the meter.

The contract price paid per meter for seal longitudinal isolation joint shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in sealing longitudinal isolation joints complete in place, including sawing, cleaning and preparing the joints in the concrete pavement, furnishing and installing joint filler material, repairing and patching spalled or raveled sawed joints, and replacing or repairing rejected joints, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 10.54 "PILING," under subsection "GENERAL," the twelfth paragraph is revised as follows:

"At Southbound 5 Truck Connector, Bridge No. 57-1028F, difficult pile installation is anticipated due to the presence of caving soils, hard metavolcanic gravel/cobble zones, and ground water."

In the Special Provisions, Section 10-1.56, "CONCRETE STRUCTURES," is revised as attached.

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-1.57, "PRECAST CONCRETE GIRDERS," under subsection "MEASUREMENT AND PAYMENT," the following paragraph is added after the last paragraph:

"Full compensation for deck crack treatment, including a program for public safety, shall be considered as included in the contract price paid per cubic meter for structural concrete (bridge) and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.62, "STRUCTURE APPROACH SLABS (TYPE R)," is revised as attached.

In the Special Provisions, Section 10-1.76, "ALTERNATIVE PIPE," the following paragraph is added after the third paragraph:

"Full compensation for slurry cement backfill shall be considered as included in the contract price paid per meter for the alternative pipe involved and no separate payment will be allowed therefor."

In the Special Provisions, Section 10-1.84, "SLOPE PROTECTION," the following two paragraphs are added after the last paragraph:

"The concrete or shotcrete for minor concrete (channel lining) shall be colored by adding a coloring agent as provided for coloring shotcrete in Section 53-1.02, "Materials," of the Standard Specifications. The color of the concrete or shotcrete for minor concrete (channel lining) shall conform closely to color No. 30450 of Federal Standard No. 595B.

Full compensation for furnishing and applying a coloring agent to the concrete or shotcrete shall be considered as included in the contract price paid per cubic meter for minor concrete (channel lining) and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.86, "MISCELLANEOUS CONCRETE CONSTRUCTION," the ninth paragraph is revised as follows:

"The textured paving shall be stamped concrete. The textured paving shall have a color conforming to Color No. 30450 of the Federal Standard No. 595B. The pattern shall be a 457 mm, on center, square grid."

In the Special Provisions, Section 10-1.86, "MISCELLANEOUS CONCRETE CONSTRUCTION," the fifteenth paragraph is revised as follows:

"Concrete for textured paving shall be placed at the locations shown on the plans, struck off and compacted until a layer of mortar is brought to the surface. Concrete for textured paving shall be screeded to the required grade and cross section and floated to a uniform surface."

In the Special Provisions, Section 10-1.87, "MINOR CONCRETE GUTTER," the following paragraphs are added after the third paragraph:

"Minor concrete (gutter) shown on the plans to be colored shall have a color conforming to color No. 30450 of Federal Standard No. 595B.

Minor concrete (gutter) to be colored will be measured and paid for as minor concrete (miscellaneous construction) colored concrete."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-2.04, "HIGHWAY PLANTING," subsection "PLANT ESTABLISHMENT WORK," the first paragraph is revised as follows:

"The plant establishment period shall be Type 2 and shall be not less than 250 working days."

In the Special Provisions, Section 10-2.04, "HIGHWAY PLANTING," under subsection "PLANT ESTABLISHMENT WORK," the first sentence of the tenth paragraph is revised as follows:

"The Contractor shall notify the Engineer 15 working days prior to beginning weed removal work within the mitigation site."

In the Special Provisions, Section 10-2.05, "IRRIGATION SYSTEMS, " under subsection "WATER METER," the first paragraph is revised as follows:

"Water meters for irrigation systems will be furnished and installed by the Contractor at the following locations:

40 mm Water Meter shall be installed on westbound Sorrento Valley Road between the "SDR" and "SDL" lines (opposite the coaster station turn-around).

50 mm Water Meters shall be installed right of the "A" Line at Station 461+75 adjacent to Vista Sorrento Parkway, on Carmel Mountain Road, west of Interstate 5 and west of the "CM3" line, on eastbound Carmel Mountain Road, east of Interstate 5, in the southwest quadrant of the interchange and on southbound El Camino Real, south of the "WS" line and adjacent to the Mitigation Site."

In the Special Provisions, Section 10-2.05, "IRRIGATION SYSTEMS," under subsection "ELECTRIC AUTOMATIC IRRIGATION COMPONENTS," under subheading "Irrigation Controllers," the fourth paragraph is revised as follows:

"Prices are guaranteed by United Green Tech, formerly Pacific Technical Services for one year from the date of the quote, January 12, 2002. Prices include tax."

In the Special Provisions, Section 10-3.28, "IRRIGATION CONTROLLER ENCLOSURE CABINET," the fourteenth paragraph is revised as follows:

"Prices are guaranteed by United Green Tech, formerly Pacific Technical Services for one year from the date of the quote, January 12, 2002. Prices include tax."

In the Special Provisions, Section 10-3.33, "HIGH MAST LIGHTING ASSEMBLY," under subsection "LUMINAIRES," the following is added to the beginning of the first paragraph:

"Luminaires shall be the cutoff type."

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

In the Special Provisions, Section 10-4.17, "WATER SYSTEM RELOCATION," subsection "RELOCATE WATER METERS," is deleted and the following subsection "WATER METER (BUILDING)," is added:

"WATER METER (BUILDING)

Water meter for the water service system, will be furnished and installed by the serving utility at the location shown on the plans.

The Contractor shall make the arrangements and pay the costs and fees required by the serving utility at the location.

The City of San Diego Water Utilities Department has established a fee of $558.00 for furnishing and installing a water meter. If, at the time of installation, the fee has been changed, the State will take a credit for any reduction in the fee, or the State will pay the difference for any increase in the fee. The credit or payment will be taken or paid on the first monthly progress payment made after the meter is installed. The Contractor shall furnish the Engineer with a copy of the invoice for the installation fee.

The Contractor shall make the arrangements for furnishing and applying water until the water meters have been installed by the serving utility.

After successful completion of all testing, the Contractor shall disconnect from the old main or temporary high line all existing water services and shall connect them to the new line.

The quantity of water meter (building) will be measured as units determined from actual count in place.

The contract unit price paid for water meter (building) shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work required for the serving utility to install the water meter (building), as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer. "

In the Proposal and Contract, the Engineer’s Estimate Items 4, 18, 19, 21, 23, 28, 33, 42, 45, 49, 58, 63, 66, 67, 68, 69, 92, 94, 97, 99, 100, 101, 102, 104, 106, 107, 134, 138, 139, 140, 163, 182, 184, 199, 206, 214, 223, 224, 226, 231, 234, 235, 237, 239, 240, 249, 254, 259, 261, 262, are revised, Items 286, 287, 288, and 289 are added and Items 260 and 285 are deleted as attached.

To Proposal and Contract book holders:

Replace the entire Engineer's Estimate in the Proposal with the attached revised Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Attached is a copy of additional Material Information.

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.

11-SD-5,56,805-Var
11-0301U4
ACIM-X073(059)N
STPL-6066(039)N

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

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

10-1.14 PROGRESS SCHEDULE (CRITICAL PATH METHOD)

The Contractor shall submit to the Engineer practicable critical path method (CPM) progress schedules in conformance with these special provisions. Whenever the term "schedule" is used in this section it shall mean CPM progress schedule.

Attention is directed to "Payments" of Section 5 of these special provisions.

The provisions in Section 8-1.04, "Progress Schedule," of the Standard Specifications shall not apply.

DEFINITIONS

The following definitions shall apply to this section:

A. ACTIVITY.—A task, event or other project element on a schedule that contributes to completing the project. Activities have a description, start date, finish date, duration and one or more logic ties.
B. BASELINE SCHEDULE.—The initial schedule representing the Contractor's work plan on the first working day of the project.
C. CONTRACT COMPLETION DATE.—The current extended date for completion of the contract shown on the weekly statement of working days furnished by the Engineer in conformance with the provisions in Section 8-1.06, "Time of Completion," of the Standard Specifications.
D. CRITICAL PATH.—The longest continuous chain of activities for the project that has the least amount of total float of all chains. In general, a delay on the critical path will extend the scheduled completion date.
E. CRITICAL PATH METHOD (CPM).—A network based planning technique using activity durations and the relationships between activities to mathematically calculate a schedule for the entire project.
F. DATA DATE.—The day after the date through which a schedule is current. Everything occurring earlier than the data date is "as-built" and everything on or after the data date is "planned."
G. EARLY COMPLETION TIME.—The difference in time between an early scheduled completion date and the contract completion date.
H. FLOAT.—The difference between the earliest and latest allowable start or finish times for an activity.
I. MILESTONE.—An event activity that has zero duration and is typically used to represent the beginning or end of a certain stage of the project.
J. NARRATIVE REPORT.—A document submitted with each schedule that discusses topics related to project progress and scheduling.
K. NEAR CRITICAL PATH.—A chain of activities with total float exceeding that of the critical path but having no more than 10 working days of total float.
L. SCHEDULED COMPLETION DATE.—The planned project finish date shown on the current accepted schedule.
M. STATE OWNED FLOAT ACTIVITY.—The activity documenting time saved on the critical path by actions of the State. It is the last activity prior to the scheduled completion date.
N. TIME IMPACT ANALYSIS.—A schedule and narrative report developed specifically to demonstrate what effect a proposed change or delay has on the current scheduled completion date.
O. TOTAL FLOAT.—The amount of time that an activity or chain of activities can be delayed before extending the scheduled completion date.
P. UPDATE SCHEDULE.—A current schedule developed from the baseline or subsequent schedule through regular monthly review to incorporate as-built progress and any planned changes.

GENERAL REQUIREMENTS

The Contractor shall submit to the Engineer baseline, monthly update and final update schedules, each consistent in all respects with the time and order of work requirements of the contract. The project work shall be executed in the sequence indicated on the current accepted schedule.

Schedules shall show the order in which the Contractor proposes to carry out the work with logical links between time-scaled work activities, and calculations made using the critical path method to determine the controlling operation or operations. The Contractor is responsible for assuring that all activity sequences are logical and that each schedule shows a coordinated plan for complete performance of the work.

The Contractor shall produce schedules using computer software and shall furnish compatible software for the Engineer's exclusive possession and use. The Contractor shall furnish network diagrams, narrative reports, tabular reports and schedule data as parts of each schedule submittal.

Schedules shall include, but not be limited to, activities that show the following that are applicable to the project:

A. Project characteristics, salient features, or interfaces, including those with outside entities, that could affect time of completion.
B. Project start date, scheduled completion date and other milestones.
C. Work performed by the Contractor, subcontractors and suppliers.
D. Submittal development, delivery, review and approval, including those from the Contractor, subcontractors and suppliers.
E. Procurement, delivery, installation and testing of materials, plants and equipment.
F. Testing and settlement periods.
G. Utility notification and relocation.
H. Erection and removal of falsework and shoring.
I. Major traffic stage switches.
J. Finishing roadway and final cleanup.
K. State-owned float as the predecessor activity to the scheduled completion date.

Schedules shall have not less than 500 and not more than ~~5~~2000 activities, unless otherwise authorized by the Engineer. The number of activities shall be sufficient to assure adequate planning of the project, to permit monitoring and evaluation of progress, and to do an analysis of time impacts.

Schedule activities shall include the following:

A. A clear and legible description.
B. Start and finish dates.
C. A duration of not less than one working day, except for event activities, and not more than 20 working days, unless otherwise authorized by the Engineer.
D. At least one predecessor and one successor activity, except for project start and finish milestones.
E. Required constraints.
F. Codes for responsibility, stage, work shifts, location and contract pay item numbers.

The Contractor may show early completion time on any schedule provided that the requirements of the contract are met. Early completion time shall be considered a resource for the exclusive use of the Contractor. The Contractor may increase early completion time by improving production, reallocating resources to be more efficient, performing sequential activities concurrently or by completing activities earlier than planned. The Contractor may also submit for approval a cost reduction incentive proposal in conformance with the provisions in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications that will reduce time of construction.

The Contractor may show a scheduled completion date that is later than the contract completion date on an update schedule, after the baseline schedule is accepted. The Contractor shall provide an explanation for a late scheduled completion date in the narrative report that is included with the schedule.

State-owned float shall be considered a resource for the exclusive use of the State. The Engineer may accrue State-owned float by the early completion of review of any type of required submittal when it saves time on the critical path. The Contractor shall prepare a time impact analysis, when requested by the Engineer, to determine the effect of the action in conformance with the provisions in "Time Impact Analysis" specified herein. The Engineer will document State-owned float by directing the Contractor to update the State-owned float activity on the next update schedule. The Contractor shall include a log of the action on the State-owned float activity and include a discussion of the action in the narrative report. The Engineer may use State-owned float to mitigate past, present or future State delays by offsetting potential time extensions for contract change orders.

The Engineer may adjust contract working days for ordered changes that affect the scheduled completion date, in conformance with the provisions in Section 4-1.03, "Changes," of the Standard Specifications. The Contractor shall prepare a time impact analysis to determine the effect of the change in conformance with the provisions in "Time Impact Analysis" specified herein, and shall include the impacts acceptable to the Engineer in the next update schedule. Changes that do not affect the controlling operation on the critical path will not be considered as the basis for a time adjustment. Changes that do affect the controlling operation on the critical path will be considered by the Engineer in decreasing time or granting an extension of time for completion of the contract. Time extensions will only be granted if the total float is absorbed and the scheduled completion date is delayed one or more working days because of the ordered change.

The Engineer's review and acceptance of schedules shall not waive any contract requirements and shall not relieve the Contractor of any obligation thereunder or responsibility for submitting complete and accurate information. Schedules that are rejected shall be corrected by the Contractor and resubmitted to the Engineer within 5 working days of notification by the Engineer, at which time a new review period of one week will begin.

Errors or omissions on schedules shall not relieve the Contractor from finishing all work within the time limit specified for completion of the contract. If, after a schedule has been accepted by the Engineer, either the Contractor or the Engineer discover that any aspect of the schedule has an error or omission, it shall be corrected by the Contractor on the next update schedule.

COMPUTER EQUIPMENT AND SOFTWARE

The Contractor shall provide for the State's exclusive possession and use a complete computer system specifically capable of creating, storing, updating and producing CPM schedules. Before delivery and setup of the computer system, the Contractor shall submit to the Engineer for approval a detailed list of all computer hardware and software the Contractor proposes to furnish. The minimum computer system to be furnished shall include the following:

A. Two (2) Complete computer systems, including keyboard, mouse, 17 inch color SVGA monitor (1,024x768 pixels), Intel Pentium IV 1.5 GHZ micro processor chip, or equal.
B. Two (2) Computer operating system software packages, compatible with the selected processing unit which shall be Windows NT 4.0, or equal.
C. Minimum 1 GB gigabytes of random access memory (RAM) for each computer.
D. Forty (40) gigabyte minimum hard disk drive, a 1.44 megabyte 3 1/2 inch floppy disk drive, 48x speed minimum CD-ROM drive, 20 gigabyte tape and ethernet card , 56K modem for each computer.
E. One (1) color-ink-jet plotter with a minimum 16 megs RAM, capable of 600 dots per inch color, 600 dots per inch monochrome, or equivalent plotter capable of printing fully legible, time scaled charts, and network diagrams, in four colors, with a minimum size of 36 inches by 48 inches (E size) and is compatible with the selected system.
F. One (1) CPM schedule software package which shall be Primavera Project Planner, version 3.0 for Windows NT 4.0.
G. Thirty (30) handheld Personal Digital Assistant (PDA) units complete, including 8.1" diagonal half-VGA DSTN color touchscreen, Ports: Serial, VGA out, infrared transmitter/receiver, audio jack, 168MHz MIPS processor, Microsoft® Windows® for Handheld PC 2000, 24MB ROM, 32MB RAM, 16MB CompactFlash™ Storage Card, internal 16MB Flash Memory (14MB available for storage), (2) Lithium ion battery for each unit, AC adapter, (2) Stylus pen for touchscreen for each unit, 78-key QWERTY keyboard, 1 Type II PC Card slot, 1 Type II CompactFlashTM slot and Integrated V.90 modem

The computer hardware and software furnished shall be compatible with that used by the Contractor for the production of the schedules required by these special provisions, and shall include original instruction manuals and other documentation normally provided with the hardware and software.

The Contractor shall furnish, install, set up, maintain and repair the computer hardware and software ready for use at a location determined by the Engineer. The hardware and software shall be installed and ready for use by the first submission of the baseline schedule. The Contractor shall provide 16 hours of formal training for the Engineer and three other agents of the Department designated by the Engineer, in the use of the hardware and software to include schedule analysis, reporting, resource and cost allocations. The training shall be performed by an authorized vendor of Primavera Project Planner software and shall be completed not more than 30 days after approval of the contract.

All computer hardware and software furnished shall become the property of the State and will not be returned to the Contractor.

NETWORK DIAGRAMS, REPORTS AND DATA

The Contractor shall include the following for each schedule submittal:

A. Two sets of originally plotted, time-scaled network diagrams.
B. Two copies of a narrative report.
C. Two copies of each of 3 sorts of the CPM software-generated tabular reports.
D. One 1.44-megabyte 90 mm (3.5 inch) floppy diskette containing the schedule data.

The time-scaled network diagrams shall conform to the following:

A. Show a continuous flow of information from left to right.
B. Be based on early start and early finish dates of activities.
C. Clearly show the primary paths of criticality using graphical presentation.
D. Be prepared on E-size sheets, 860 mm x 1120 mm (34 inch x 44 inch).
E. Include a title block and a timeline on each page.

The narrative report shall be organized in the following sequence with all applicable documents included:

A. Contractor's transmittal letter.
B. Work completed during the period.
C. Identification of unusual conditions or restrictions regarding labor, equipment or material; including multiple shifts, 6-day work weeks, specified overtime or work at times other than regular days or hours.
D. Description of the current critical path.
E. Changes to the critical path and scheduled completion date since the last schedule submittal.
F. Description of problem areas.
G. Current and anticipated delays:

    1. Cause of delay.
    2. Impact of delay on other activities, milestones and completion dates.
    3. Corrective action and schedule adjustments to correct the delay.

H. Pending items and status thereof:

    1. Permits
    2. Change orders
    3. Time adjustments
    4. Non-compliance notices

I. Reasons for an early or late scheduled completion date in comparison to the contract completion date.

Tabular reports shall be software-generated and provide information for each activity included in the project schedule. Three different reports shall be sorted by (1) activity number, (2) early start and (3) total float. Tabular reports shall be 215 mm x 280 mm (8 1/2 inch x 11 inch) in size and shall include, as a minimum, the following applicable information:

A. Data date
B. Activity number and description
C. Predecessor and successor activity numbers and descriptions
D. Activity codes
E. Scheduled, or actual and remaining durations (work days) for each activity
F. Earliest start (calendar) date
G. Earliest finish (calendar) date
H. Actual start (calendar) date
I. Actual finish (calendar) date
J. Latest start (calendar) date
K. Latest finish (calendar) date
L. Free float (work days)
M. Total float (work days)
N. Percentage of activity complete and remaining duration for incomplete activities.
O. Lags
P. Required constraints

Schedule submittals will only be considered complete when all documents and data have been provided as described above.

PRE-CONSTRUCTION SCHEDULING CONFERENCE

The Contractor shall schedule and the Engineer will conduct a pre-construction scheduling conference with the Contractor's project manager and construction scheduler within 10 working days of the approval of the contract. At this meeting the Engineer will review the requirements of this section of the special provisions with the Contractor.

The Contractor shall submit a general time-scaled logic diagram displaying the major activities and sequence of planned operations and shall be prepared to discuss the proposed work plan and schedule methodology that comply with the requirements of these special provisions. If the Contractor proposes deviations to the construction staging of the project, then the general time-scaled logic diagram shall also display the deviations and resulting time impacts. The Contractor shall be prepared to discuss the proposal.

At this meeting, the Contractor shall additionally submit the alphanumeric coding structure and the activity identification system for labeling the work activities. To easily identify relationships, each activity description shall indicate its associated scope or location of work by including such terms as quantity of material, type of work, bridge number, station to station location, side of highway (such as left, right, northbound, southbound), lane number, shoulder, ramp name, ramp line descriptor or mainline.

The Engineer will review the logic diagram, coding structure, and activity identification system, and provide any required baseline schedule changes to the Contractor for implementation.

BASELINE SCHEDULE

Beginning the week following the pre-construction scheduling conference, the Contractor shall meet with the Engineer weekly until the baseline schedule is accepted by the Engineer to discuss schedule development and resolve schedule issues.

The Contractor shall submit to the Engineer a baseline schedule within 20 working days of approval of the contract. The Contractor shall allow 3 weeks for the Engineer's review after the baseline schedule and all support data are submitted. In addition, the baseline schedule submittal will not be considered complete until the computer software is delivered and installed for use in review of the schedule.

The baseline schedule shall include the entire scope of work and how the Contractor plans to complete all work contemplated. The baseline schedule shall show the activities that define the critical path. Multiple critical paths and near-critical paths shall be kept to a minimum. A total of not more than 35 percent of the baseline schedule activities shall be critical or near critical, unless otherwise authorized by the Engineer.

The baseline schedule shall not extend beyond the number of working days specified in these special provisions. The baseline schedule shall have a data date of the first working day of the contract and not include any completed work to date. The baseline schedule shall not attribute negative float or negative lag to any activity.

The baseline schedule shall be supplemented with resource allocations for every task activity and include time-scaled resource histograms. The resource allocations shall be shown to a level of detail that facilitates report generation based on labor crafts and equipment classes for the Contractor and subcontractors. The Contractor shall use average composite crews to display the labor loading of on-site construction activities. The Contractor shall optimize and level labor to reflect a reasonable plan for accomplishing the work of the contract and to assure that resources are not duplicated in concurrent activities. The time-scaled resource histograms shall show labor crafts and equipment classes to be utilized on the contract. The Engineer may review the baseline schedule activity resource allocations using Means Productivity Standards or equivalent to determine if the schedule is practicable.

UPDATE SCHEDULE

The Contractor shall submit an update schedule and meet with the Engineer to review contract progress, on or before the first day of each month, beginning one month after the baseline schedule is accepted. The Contractor shall allow 2 weeks for the Engineer's review after the update schedule and all support data are submitted, except that the review period shall not start until the previous month's required schedule is accepted. Update schedules that are not accepted or rejected within the review period will be considered accepted by the Engineer.

The update schedule shall have a data date of the twenty-first day of the month or other date established by the Engineer. The update schedule shall show the status of work actually completed to date and the work yet to be performed as planned. Actual activity start dates, percent complete and finish dates shall be shown as applicable. Durations for work that has been completed shall be shown on the update schedule as the work actually occurred, including Engineer submittal review and Contractor resubmittal times.

The Contractor may include modifications such as adding or deleting activities or changing activity constraints, durations or logic that do not (1) alter the critical path(s) or near critical path(s) or (2) extend the scheduled completion date compared to that shown on the current accepted schedule. The Contractor shall state in writing the reasons for any changes to planned work. If any proposed changes in planned work will result in (1) or (2) above, then the Contractor shall submit a time impact analysis as described herein.

TIME IMPACT ANALYSIS

The Contractor shall submit a written time impact analysis (TIA) to the Engineer with each request for adjustment of contract time, or when the Contractor or Engineer consider that an approved or anticipated change may impact the critical path or contract progress.

The TIA shall illustrate the impacts of each change or delay on the current scheduled completion date or internal milestone, as appropriate. The analysis shall use the accepted schedule that has a data date closest to and prior to the event. If the Engineer determines that the accepted schedule used does not appropriately represent the conditions prior to the event, the accepted schedule shall be updated to the day before the event being analyzed. The TIA shall include an impact schedule developed from incorporating the event into the accepted schedule by adding or deleting activities, or by changing durations or logic of existing activities. If the impact schedule shows that incorporating the event modifies the critical path and scheduled completion date of the accepted schedule, the difference between scheduled completion dates of the two schedules shall be equal to the adjustment of contract time. The Engineer may construct and utilize an appropriate project schedule or other recognized method to determine adjustments in contract time until the Contractor provides the TIA.

The Contractor shall submit a TIA in duplicate within 15 working days of receiving a written request for a TIA from the Engineer. The Contractor shall allow the Engineer 2 weeks after receipt to approve or reject the submitted TIA. All approved TIA schedule changes shall be shown on the next update schedule.

If a TIA submitted by the Contractor is rejected by the Engineer, the Contractor shall meet with the Engineer to discuss and resolve issues related to the TIA. If agreement is not reached, the Contractor will be allowed 15 days from the meeting with the Engineer to give notice in conformance with the provisions in Section 9-1.04, "Notice of Potential Claim," of the Standard Specifications. The Contractor shall only show actual as-built work, not unapproved changes related to the TIA, in subsequent update schedules. If agreement is reached at a later date, approved TIA schedule changes shall be shown on the next update schedule. The Engineer will withhold remaining payment on the schedule contract item if a TIA is requested by the Engineer and not submitted by the Contractor within 15 working days. The schedule item payment will resume on the next estimate after the requested TIA is submitted. No other contract payment will be retained regarding TIA submittals.

FINAL UPDATE SCHEDULE

The Contractor shall submit a final update, as-built schedule with actual start and finish dates for the activities, within 30 days after completion of contract work. The Contractor shall provide a written certificate with this submittal signed by the Contractor's project manager and an officer of the company stating, "To my knowledge and belief, the enclosed final update schedule reflects the actual start and finish dates of the actual activities for the project contained herein." An officer of the company may delegate in writing the authority to sign the certificate to a responsible manager.

RETENTION

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during each estimate period in which the Contractor fails to submit an acceptable schedule conforming to the requirements of these special provisions as determined by the Engineer. Schedule retentions will be released for payment on the next monthly estimate for partial payment following the date that acceptable schedules are submitted to the Engineer or as otherwise specified herein. Upon completion of all contract work and submittal of the final update schedule and certification, any remaining retained funds associated with this section, "Progress Schedule (Critical Path Method)", will be released for payment. Retentions held in conformance with this section shall be in addition to other retentions provided for in the contract. No interest will be due the Contractor on retention amounts.

PAYMENT

Progress schedule (critical path method) will be paid for at a lump sum price. The contract lump sum price paid for progress schedule (critical path method) shall include full compensation for furnishing all labor, material, tools, equipment, and incidentals, including computer software, and for doing all the work involved in preparing, furnishing, and updating schedules, and instructing and assisting the Engineer in the use of computer software, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Payments for the progress schedule (critical path method) contract item will be made progressively as follows:

A. A total of 25 percent of the item amount or a total of 25 percent of the amount listed for progress schedule (critical path method) in "Payments" of Section 5 of these special provisions, whichever is less, will be paid upon achieving all of the following:

    1. Completion of 5 percent of all contract item work.
    2. Acceptance of all schedules and TIAs required to the time when 5 percent of all contract item work is complete.
    3. Delivery of schedule software to the Engineer.
    4. Completion of required schedule software training.

B. A total of 50 percent of the item amount or a total of 50 percent of the amount listed for progress schedule (critical path method) in "Payments" of Section 5 of these special provisions, whichever is less, will be paid upon completion of 25 percent of all contract item work and acceptance of all schedules and TIAs required to the time when 25 percent of all contract item work is complete.

C. A total of 75 percent of the item amount or a total of 75 percent of the amount listed for progress schedule (critical path method) in "Payments" of Section 5 of these special provisions, whichever is less, will be paid upon completion of 50 percent of all contract item work and acceptance of all schedules and TIAs required to the time when 50 percent of all contract item work is complete.

D. A total of 100 percent of the item amount or a total of 100 percent of the amount listed for progress schedule (critical path method) in "Payments" of Section 5 of these special provisions, whichever is less, will be paid upon completion of all contract item work, acceptance of all schedules and TIAs required to the time when all contract item work is complete, and submittal of the certified final update schedule.

If the Contractor fails to complete any of the work or provide any of the schedules required by this section, the Engineer shall make an adjustment in compensation in conformance with the provisions in Section 4-1.03C, "Changes in Character of Work," of the Standard Specifications for the work not performed. Adjustments in compensation for schedules will not be made for any increased or decreased work ordered by the Engineer in furnishing schedules.

10-1.155 ELECTRONIC MOBILE DAILY DIARY SYSTEM DATA DELIVERY

Attention is directed to Sections 5-1.10, "Equipment and Plants," and 7-1.01A(3), "Payroll Records," of the Standard Specifications, and these special provisions.

The Contractor shall submit to the Engineer a list of each piece of equipment and its identifying number, type, make, model and rate code in accordance with the Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rate" which is in effect on the date the work is performed, and the names, labor rates and work classifications for all field personnel employed by the Contractor and all subcontractors in connection with the public work, together with such additional information as is identified below. This information shall be updated and submitted to the Engineer weekly through the life of the project.

This personnel information will only be used for this mobile daily diary computer system and it will not relieve the Contractor and subcontractors from all the payroll records requirements as required by Section 7-1.01A(3), "Payroll Records," of the Standard Specifications.

The Contractor shall provide the personnel and equipment information not later than 11 days after the contract award for its own personnel and equipment, and not later than 5 days before start of work by any subcontractor for the labor and equipment data of that subcontractor.

The minimum data to be furnished shall comply with the following specifications:

Data Content Requirements.

1. The Contractor shall provide the following basic information for itself and for each subcontractor that will be used on the contract:

	Caltrans contract ID	Alphanumeric; up to 15 characters.
	Company name.	Alphanumeric; up to 30 characters.
	Federal tax ID	Alphanumeric; up to 10 characters.
	State contractor license	Alphanumeric; up to 20 characters.
	Company type (prime or sub)	Alphanumeric; up to 10 characters.
	Address (line 1).	Alphanumeric; up to 30 characters.
	Address (line 2).	Alphanumeric; up to 30 characters.
	Address (city).	Alphanumeric; up to 30 chars.
	Address (2-letter state code).	Alphanumeric; up to 2 characters.
	Address (zip code)	Alphanumeric; up to 14 characters.
	Contact FirstNname.	Alphanumeric; up to 15 characters
	Contact LastName	Alphanumeric; up to 20 characters
	Telephone number (with area code).	Alphanumeric; up to 20 characters.
	Company code: short company name.	Alphanumeric; up to 10 characters.
	Type of work (Department-supplied codes)	Alphanumeric; up to 30 characters
	DBE status (Department-supplied codes)	Alphanumeric; up to 20 characters.
	Ethnicity for DBE status (Department-supplied codes).	Alphanumeric; up to 20 characters.
List of laborers to be used on this contract (detail specified below).		
List of equipment to be used on this contract (detail specified below).		

For example, one such set of information for a company might be:
04-072359
XYZ CONSTRUCTION,INC.
94-2991040
AL1649T
SUB
1240 9TH STREET
SUITE 600
OAKLAND
CA
94612
JOHN
SMITH
(510) 834-9999
XYZ
PAVING
MBE
BLACK

2. The Contractor shall provide the following information for each laborer who will be used on the contract:

	Caltrans contract ID	Alphanumeric; up to 15 characters.
	Company code (as defined above).	Alphanumeric; up to 10 characters.
	Employee ID	Alphanumeric; up to 10 characters.
	Last name.	Alphanumeric; up to 20 characters.
	First name.	Alphanumeric; up to 15 characters.
	Middle name.	Alphanumeric; up to 15 characters.
	Suffix	Alphanumeric; up to 15 characters
	Labor trade (Department-provided codes).	Alphanumeric; up to 10 characters.
	Labor classification (Department-provided codes).	Alphanumeric; up to 10 characters.
	Regular hourly rate.	Alphanumeric; up to (6,2)
	Overtime hourly rate.	Alphanumeric; up to (6,2)
	Doubletime hourly rate	Alphanumeric; up to (6,2)
	Standby hourly rate.	Alphanumeric; up to (6,2)
	Ethnicity (Department-provided codes).	Alphanumeric; up to 20 characters.
	Gender.	Alphanumeric; up to 1 characters.

For example, one such set of information might be:
04-072359
XYZ
1249
GONZALEZ
HECTOR
VINCENT
JR.
OPR
JNY
12.50
18.75
25.00
0.00
HISPANIC
M

The Contractor shall provide the following information for each piece of equipment that will be used on the contract:

	Caltrans contract ID	Alphanumeric; up to 15 characters.
	Company code (as defined above).	Alphanumeric; up to 10 characters.
	Company's equipment ID number.	Alphanumeric; up to 10 characters.
	Company's equipment description.	Alphanumeric; up to 60 characters.
	Equipment type (from Department ratebook).	Alphanumeric; up to 60 characters.
	Equipment make (from Department ratebook).	Alphanumeric; up to 60 characters.
	Equipment model (from Department ratebook).	Alphanumeric; up to 60 characters.
	Equipment rate code (from Department ratebook).	Alphanumeric; up to 10 characters
	Regular hourly rate.	Alphanumeric; up to (6,2)
	Overtime hourly rate.	Alphanumeric; up to (6,2)
	Standby hourly rate	Alphanumeric; up to (6,2)
	Idle hourly rate.	Alphanumeric; up to (6,2)
	Rental flag.	Alphanumeric; up to 1 character.

For example, one such set of information might be:
04-072359
XYZ
B043
CAT TRACTOR D-6C
TRACC
CAT
D-6C
3645
75.00
75.00
0.00
0.00
N

Data Delivery Requirements.--

1. All data described in “Data Requirements” of this section shall be delivered to the Department electronically, on 3 1/2” floppy disks compatible with the Microsoft Windows operating system. The Contractor shall provide a weekly disk and hard copy of the required correct updated personnel and equipment information for the Contractor and all the subcontractors and verified correct by the Engineer.
2. Data of each type described in the previous section (contractor, labor, and equipment information) will be delivered separately, each type in one or more files on floppy disk. Any given file may contain information from one contractor or from multiple contractors, but only one type of data (contractor, labor, or equipment information).
3. The file format for all files delivered to Caltrans shall be standard comma-delimited, plain text files. This type of file (often called “CSV”) is the most standard type for interchange of formatted data; it can be created and read by all desktop spreadsheet and desktop database applications. Characteristics of this type of file are:

- All data is in the form of plain ASCII characters.
- Each row of data (company, person, equipment) is delimited by a carriage return character.
- Within rows, each column (field) of data is delimited by a comma character.

4. The files shall have the following columns (i.e., each row shall have the following fields):

- Contractor info: 17 columns (fields) as specified in “Data Requirements #1”,above.
- Labor info: 15 columns (fields) as specified in “Data Requirements #2”,above.
- Equipment info: 13 columns (fields) as specified in “Data Requirements #3”,above.

For every one type of file, columns (fields) must be in the order specified under “Data Requirements”, above. All columns (fields) described under “Data Requirements” must be present for all rows, even if some column (field) values are empty. The first row of each file must contain column headers (in plain text).

5. Column (field) contents must conform to the data type and length requirements described in the “Data Requirement” section, above. In addition, column (field) data must conform to the following restrictions:

- All data shall be uppercase.
- Company type shall be either “PRIME” or “SUB”.
- Labor trade and classification codes must conform to a list of standard codes that will be supplied by Department.
- Contractor type of work codes and DBE status codes must conform to a list of standard codes that will be supplied by Department.
- Ethnicity codes must conform to standard codes that will be supplied by Department.
- Data in the “gender” column must be either “M” or “F”.
- Data in the “rental equipment” column must be either “Y” or “N”.
- Equipment owner's description may not be omitted. (The description, together with the equipment number, is how the equipment will be identified in the field.) Include manufacturer, rated capacity & trade description
- Equipment type, make, model, and ratebook code shall conform to the Department of Transportation Publication entitled “Labor Surcharge and Equipment Rental Rate”, which is in effect on the date the work is performed. If the equipment in question does not have an entry in the book then alternate, descriptive entries may be made in these fields as directed by the Engineer.

The name of each file must indicate its contents, e.g., “labor.csv” for laborers, “equipment.csv” for equipment, and “contractor.csv” for contractors. Each floppy disk supplied to Caltrans must be accompanied by a printed list of the files it contains with a brief description of the contents of each file.

PAYMENT.-- Payment for providing electronic mobile daily diary computer system data delivery will be made on a lump sum basis. The lump sum bid price for electronic mobile daily diary computer system data delivery will be made according to the following schedule:

The Contractor will receive not more than 3.4000 per cent per month of the total bid price for electronic mobile daily diary computer system data delivery .

After the completion of the work, 100 per cent payment will be made for electronic mobile daily diary computer system data delivery less the permanent deduction, if any, for failure to deliver complete weekly electronic mobile daily diary computer system data in each month.

The contract lump sum price paid for electronic mobile daily diary computer system data delivery shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in electronic mobile daily diary computer system data delivery as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The Department will retain an amount equal to 25 percent of the estimated value of the work performed during the first estimate period in which the Contractor fails to submit electronic mobile daily diary computer system data delivery conforming to the requirements of this section, as determined by the Engineer. Thereafter, on subsequent successive estimate periods the percentage the Department will retain will be increased at the rate of 25 percent per estimate period in which acceptable electronic mobile daily diary computer system data have not been submitted to the Engineer. Retentions for failure to submit acceptable electronic mobile daily diary computer system data shall be additional to all other retentions provided for in the contract. The retention for failure to submit acceptable electronic mobile daily diary computer system data will be released for payment on the next monthly estimate for partial payment following the date that acceptable electronic mobile daily diary computer system data is submitted to the Engineer.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications, shall not apply to the item of electronic mobile daily diary computer system data delivery. Adjustments in compensation for electronic mobile daily diary computer system data delivery will not be made for any increased or decreased work ordered by the Engineer in furnishing electronic mobile daily diary computer system data.

10-1.16 OBSTRUCTIONS

Utility Owner and type of facility	Location	Utility N / W Days	Site Prep by Contractor	Utility Co. Work
San Diego Gas and Electric Under Built O/H electric	"U-12", Roselle St., Route 5 O.C.	20/40	Falsework removed from Sorrento Valley Viaduct (widen) and complete Box Girder finishing at Roselle St.	Install Under-built O/H and splice cables
San Diego Gas and Electric O/H electric	"U-12", Roselle St., Route 5 O.C.	20/40	Provide access around temporary system at Sorrento Valley Viaduct (widen) at Roselle St	Remove temporary system from service after new cables are spliced and new system activated
San Diego Gas and Electric O/H electric	"U-20", West of "CM3" Line Sta. 539+00	20/20	Complete stone columns, clear construction area and provide access around pole location.	Construct foundation of the electric pole
San Diego Gas and Electric O/H electric	"U-18-20", West of "CM3" Line Sta. 539+00 and East of "NB" Line, Sta. 536+60 to 539+20	20/40	Clear construction area and provide access around power poles.	Place steel pole & relocate overhead power lines and remove poles See note (a)
San Diego Gas and Electric O/H electric	"U-20 & 22", West of "CM3" Line Sta. 539+00 to 543+85	20/40	Clear construction area and provide access around power poles.	Construct poles & relocate overhead power lines and remove poles See note (a)
SDG&E U/G electric	"U-22","CMR" line, Sta. 1+20 to 2+50	20/40	Complete subgrade for street widening and S/B on/off ramp	Relocate Terminator & Install/remove underground appurtenances and splice cables
Pacific Bell U/G telephone	"U-22","CMR" line, Sta. 1+20 to 2+50	20/20	Complete subgrade for street widening and S/B on ramp	Install/remove underground and appurtenances and splice cables
Pacific Bell U/G telephone	"U-22","CMR" line, Sta. 1+80 to 2+60	20/20	Complete subgrade on S/B off ramp	Relocate manhole and Install/remove underground and appurtenances and splice cables
SDG&E 100 mm gas	"U-22","CMR" line, Sta. 1+20 to 2+50	20/20	Complete subgrade for street widening and S/B on ramp	Relocate gas main and appurtenances
TW Cable	"U-22 & 23","CMR" line, Sta. 1+20 to 4+20	20/30	Complete subgrade for street widening, S/B on ramp and N/B off Ramp	Relocate conduits
SDG&E O/H electric	"U-24 & 26", West of "CM3" Line Sta. 543+85 to Left "SB" line, Sta. 550+00	20/40	Clear construction area and provide access around power poles.	Construct poles & relocate overhead power lines and remove poles See note (a)

"Note:
(a) Utility Company will not begin work until after September 1, 2002"

10-1.21 MAINTAINING TRAFFIC

Carmel Mountain Road
Bridge No. 57-314L/R/S

	Number	Width	Height
Vehicle Opening Westside	1	8.1 m	4.6 m
Vehicle Opening Eastside	1	4.8 m	4.6 m
Pedestrian Openings	1 (eastside)	1.5 m	3.0 m

	Location	Spacing
Falsework Pavement Lighting	R and L	9 staggered $^1/_2$ space

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Sorrento Valley Blvd.
Bridge No. 57-1069F
Includes Bike Path

	Number	Width	Height
Vehicle Openings	1	19.5 m	4.6 m
Pedestrian Openings	1 southside of westbound travel way	1.5 m	3.0 m

	Location	Spacing
Falsework Pavement Lighting	R	7

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Southbound I-5
Bridge No. 57-1069F

	Number	Width	Height
Vehicle Openings	1	15.5 m	4.6 m

	Location	Spacing
Falsework Pavement Lighting	R	7

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Sorrento Valley Blvd.
Bridge No. 57-1070G
Includes Bike Path

	Number	Width	Height
Vehicle Openings	1	7.7 m	4.6 m
Pedestrian Openings	1 northside of eastbound travel way	1.5 m	3.0 m

	Location	Spacing
Falsework Pavement Lighting	R	7

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Sorrento Valley Road
Bridge No. 57-513L/R
&
Bridge No. 57-1028F

	Number	Width	Height
Vehicle Opening Southbound	1	7.5 m	4.6 m
Vehicle Opening Nortbound	1	9.6 m	4.6 m
Pedestrian Opening Southbound	1	1.5 m	3.0

	Location	Spacing
Falsework Pavement Lighting	R and L	9 staggered $^1/_2$ space

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Roselle Street
Bridge No. 57-513

	Number	Width	Height
Vehicle Openings	1	11.7 m	4.6 m
Pedestrian Openings (eastside)	1	1.5 m	3.0 m

	Location	Spacing
Falsework Pavement Lighting	R and L	9 staggered $^1/_2$ space

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Sorrento Valley Train Station
Bridge No. 57-513

	Number	Width	Height
Railway Openings	1	11 m	6 m
	Location	Spacing	
Falsework Pavement Lighting	R and L	12 staggered $^1/_2$ space	

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Carmel Valley Road
Bridge No.57-1028F

	Number	Width	Height
Vehicle Opening	1	19.4 m	4.8 m
Pedestrian Opening Eastbound	1	1.5 m	3.0 m
	Location	Spacing	
Falsework Pavement Lighting	R, L, C	12, staggered $^1/_2$ space with C	

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

"CV3" line under Southbound 5 Connector
Bridge No. 57-1028F

	Number	Width	Height
Vehicle Opening	1	9.0 m	4.6 m
	Location	Spacing	
Falsework Pavement Lighting	R and L	9, staggered $^1/_2$ space	

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

(Existing) Bridge Across Los Penasquitos Channel
Bridge No. 57-511

	Number	Width	Height
Vehicle Openings	1	20.0 m	4.8 m

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

"AL" and "AR" lines under Route 5/805 Separation
Bridge No. 57-0512

	Number	Width	Height
Vehicle Opening "AR"	1	15.2 m	4.6 m
Vehicle Opening "AL"	1	14.7 m	4.6 m
	Location	Spacing	
Falsework Pavement Lighting	R and L	7	

(Width and Height in meters)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Chart No. 7
Multilane Lane Requirements

Direction: Northbound SD-5 | Location: At NB Off-ramp to RTE 52

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F	F																	3	3	2	
Fridays	F	F	F	F	F																				
Saturdays																									
Sundays																						3	2	2	
Day before designated legal holiday	F	F	F	F	F																				
Designated legal holidays																									

Legend:

F	Freeway may be closed
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

· **This chart may not be used in conjunction with Charts No.9, No.9A & No.24.**

Full freeway closure is for the erection and removal of falsework only.

Close Freeway at NB RTE 5 Off-ramp to EB RTE 52.

Detour NB RTE 5 traffic via northerly on RTE 5 to NB RTE 5 Off-ramp to EB RTE 52 thence easterly on RTE 52 to EB RTE 52 Off-ramp to NB RTE 805 thence northerly on RTE 805 to NB RTE 5.
NOTE: Place a PCMS (Portable Changeable Message Sign) on NB RTE 5 at Clairemont Mesa Blvd. warning traffic of the freeway closure/detour ahead.

· **The following ramps must be closed at the same time as per chart #7A & 25.**

NB RTE 5 On-ramp from Gilman Dr.
NB RTE 5 On-ramp from EB La Jolla Village Dr.
NB RTE 5 On-ramp from WB La Jolla Village Dr.
NB RTE 5 On-ramp from Genesee Ave.
WB RTE 52 Off-ramp to NB RTE 5

Full freeway closure is for the erection and removal of falsework only.

KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

Chart No. 7A
Ramp Lane Requirements

Direction: Northbound SD-5 | Location: See Remarks

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																	R	R	R	
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																						R	R	R	
Day before designated legal holiday	R	R	R	R	R																				
Designated legal holidays																									

Legend:

R — Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

· **This chart is to be used in conjunction with Chart #7 & #25 for full freeway closure only.**

Location	K.P.
Ramps may be closed after the freeway has been closed as per chart #7.	
NB On-ramp from Gilman Dr.	R 43.527
NB On-ramp from EB La Jolla Village Dr.	R 45.707
NB On-ramp from WB La Jolla Village Dr.	R 46.015
NB On-ramp from Genesee Av.	R 47.680

F=PD0301U4080300KJ

Chart No. 8
Multilane Lane Requirements

Direction: Southbound SD-5 | Location: At SB Off-ramp to RTE 805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F	F																	3	2	2	
Fridays	F	F	F	F	F																				
Saturdays																									
Sundays																						3	3	2	
Day before designated legal holiday	F	F	F	F	F																				
Designated legal holidays																									

Legend:

F	Freeway may be closed
1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
Full freeway closure is for the erection and removal of falsework only.
Close Freeway at SB Off-ramp to RTE 805.

Detour SB RTE 5 traffic via southerly on RTE 805 to SB RTE 805 Off-ramp to WB RTE 52 thence westerly on RTE 52 to WB RTE 52 Off-ramp NB/SB RTE 5.

Full freeway closure is for the erection and removal of falsework only.

NOTE: Place a PCMS (Portable Changeable Message Sign) on SB RTE 5 at Carmel Mountain Rd. warning traffic of the freeway closure/detour ahead.

KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

Chart No. 9
Multilane Lane Requirements

Direction: Northbound SD-805 | Location: At NB Off-ramp to RTE 52

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F																		2	2	2	
Fridays	F	F	F	F																					
Saturdays																									
Sundays																						2	2	1	
Day before designated legal holiday	F	F	F	F																					
Designated legal holidays																									

Legend:

F	Freeway may be closed
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

· **This chart may not be used in conjunction with Charts No.7, No.7A & No.25.**

Full freeway closure is for the erection and removal of falsework only.

Close Freeway at NB RTE 805 Off-ramp to WB RTE 52.

Detour NB RTE 805 traffic via northerly on RTE 805 to NB RTE 805 Off-ramp to WB RTE 52 thence westerly on RTE 52 to WB RTE 52 Off-ramp NB RTE 5 thence northerly on RTE 5 to RTE 805.
NOTE: Place a PCMS (Portable Changeable Message Sign) on NB RTE 805 at Clairemont Mesa Blvd. warning traffic of the freeway closure/detour ahead.

· **The following ramps must be closed at the same time as per chart #9A& #24.**

NB RTE 805 On-ramp from Governor Dr.
NB RTE 805 On-ramp from WB Miramar Rd.
NB RTE 805 On-ramp from EB La Jolla Village Dr.
NB RTE 805 On-ramp from WB Mira Mesa Blvd.
EB 52 Off-ramp to NB RTE 805
WB 52 Off-ramp to NB RTE 805

Full freeway closure is for the erection and removal of falsework only.

KP: 38.06 / 45.87

F=PD0301U4073100KJ

Chart No. 9A
Ramp Lane Requirements

Direction: Northbound SD-805 | Location: See Remarks

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																	R	R	R	
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																						R	R	R	
Day before designated legal holiday	R	R	R	R	R																				
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

· **This chart is to be used in conjunction with chart #9 & #24 for full freeway closure only.**

Location	K.P.
Ramps may be closed after the freeway has been closed as per chart #9	
NB On-ramp from Governor Dr.	39.586
NB On-ramp from EB La Jolla Village Dr.	42.012
NB On-ramp from WB Miramar Rd.	42.014
NB On-ramp from WB Mira Mesa Blvd.	43.910

F=PD0301U4080300KJ

Chart No. 10
Multilane Lane Requirements

Direction: Southbound SD-805 | Location: At SB On-ramp from RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F	F																	2	2	1	
Fridays	F	F	F	F	F																				
Saturdays																									
Sundays																						2	2	1	
Day before designated legal holiday	F	F	F	F	F																				
Designated legal holidays																									

Legend:

F	Freeway may be closed
1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

Full freeway closure is for the erection and removal of falsework only.
Close Freeway RTE 805 at RTE 5.
Detour SB RTE 5 traffic to SB RTE 805 via southerly on RTE 5 to SB RTE 5 Off-ramp to EB RTE 52 thence easterly on RTE 52 to EB RTE 52 Off-ramp to NB/SB RTE 805.
Full freeway closure is for the erection and removal of falsework only.
NOTE: Place a PCMS (Portable Changeable Message Sign) on SB RTE 5 at Carmel Mountain Rd. warning traffic of the freeway closure/detour ahead.

KP: 38.06 / 45.87

F=PD0301U4073100KJ

Chart No. 11
Ramp Lane Requirements

Direction: Northbound SD-5

Location: NB Off-ramp to Roselle St./Sorrento Valley Rd.

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R															R	R	R	R	
Fridays	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	
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	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 48.372

NOTE: Detour NB RTE 5 to Sorrento Valley Road traffic via northerly on RTE 5 to NB RTE 5 off-ramp to Carmel Valley Road thence Easterly on Carmel Valley Road to El Camino Real thence Southerly on El Camino Real to Carmel Mountain Road thence Westerly on Carmel Mountain Road to Sorrento Valley Road.

F=PD0301U4080300KJ

Chart No. 12
Ramp Lane Requirements

Direction: Southbound SD-5

Location: SB On-ramp from Carmel Valley Rd.
SB On-ramp from Roselle St/
Sorrento Valley Rd

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R														R	R	R	R	R	
Fridays	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	
Sundays	R	R	R	R	R	R	R	R	R	R	R					R	R	R	R	R	R	R	R	R	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 52.769

F=PD0301U4080300KJ

Chart No. 14
Ramp Lane Requirements

Direction: Southbound SD-5 | Location: SB Off-ramp to Genesee Ave.

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R														R	R	R	R	R	
Fridays	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	
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	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R — Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 47.687

NOTE: : Detour SB RTE 5 to Genesee Ave traffic via southerly on RTE 5 to SB RTE 5 Off-ramp to La Jolla Village Dr thence easterly on La Jolla Village Dr to NB Rte 5 on from La Jolla Village Dr thence Northerly on RTE 5 to NB RTE 5 Off-Ramp to Genesee Ave .

F=PD0301U4080300KJ

Chart No. 20
Street Lane Requirements

Direction: Northbound – Southbound Sorrento Valley Rd.

Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																	X	X	X	
Fridays	X	X	X	X	X																	X	X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																	X	X	X	
Designated legal holidays																									

Legend:

X — Street may be closed

(blank) — No work that interferes with public traffic will be allowed

REMARKS:

This chart can be used for closing each direction individually and for complete closure of Sorrento Valley Rd. under RTE 5.

Detour NB Sorrento Valley Road traffic via easterly on Sorrento Valley Blvd. to Vista Sorrento Pkwy. thence southerly on Vista Sorrento Pkwy. to NB RTE 805 On-ramp from Vista Sorrento Pkwy. thence northerly on RTE 805 to EB RTE 56 Off-ramp from RTE 805/5 thence easterly on RTE 56 to El Camino Real thence southerly on El Camino Real to Carmel Mountain Rd. thence westerly on Carmel Mountain Rd. to Sorrento Valley Rd..

Detour SB Sorrento Valley Road traffic via northerly on Sorrento Valley Road to Carmel Mountain Rd. thence easterly on Carmel Mountain Rd. to El Camino Real thence northerly on El Camino Real to RTE 56 thence westerly on Carmel Valley Rd. to SB RTE 5 On-ramp Carmel Valley Rd thence southerly on RTE 5 to RTE 805 thence southerly on RTE 805 to Sorrento Valley Rd.

F=PD0301U4080300KJ

Chart No. 21
Street Lane Requirements

Direction: Eastbound – Westbound Carmel Mountain Rd.

Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																	X	X	X	
Fridays	X	X	X	X	X																	X	X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																	X	X	X	
Designated legal holidays																									

Legend:

X Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

Traffic maybe detoured on Vista Sorrento Pkwy. If Vista Sorrento Parkway is open between Carmel Mountain Rd and Sorrento Valley Blvd.

F=PD0301U4080300KJ

Chart No. 22
Street Lane Requirements

Direction: Northbound – Southbound Sorrento Valley Ct.

Location: Parallel to RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																	X	X	X	
Fridays	X	X	X	X	X																	X	X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																	X	X	X	
Designated legal holidays																									

Legend:

X Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

Allow local traffic only.

F=PD0301U4080300KJ

Chart No. 23
Street Lane Requirements

Direction: Eastbound – Westbound Carmel Valley Rd. | Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																	X	X	X	
Fridays	X	X	X	X	X																				
Saturdays																									
Sundays																						X	X	X	
Day before designated legal holiday	X	X	X	X	X																				
Designated legal holidays																									

Legend:

X — Street may be closed

(blank) — No work that interferes with public traffic will be allowed

REMARKS:

Detour WB Carmel Valley Rd. traffic via to NB RTE 5 thence northerly on RTE 5 to NB RTE 5 Off-ramp to Del Mar Heights Rd thence westerly on Del Mar Heights Rd to SB RTE 5 to thence southerly on RTE 5 to SB RTE 5 Off-Ramp to Carmel Valley Rd.

Detour EB Carmel Valley Rd traffic via southerly on RTE 5 to SB RTE 5 Off-ramp to Genesee Ave thence easterly on Genesee Ave. to NB Rte 5 thence northerly on RTE 5 to NB RTE 5 Off-ramp to Carmel Valley Rd.

F=PD0301U4080300KJ

Chart No. 24
Ramp Lane Requirements

Direction:		Location:	
	Eastbound SD – 52		EB Off-ramp to NB RTE 805;*
	Westbound SD – 52		WB Off-ramp to NB RTE 805*
	Westbound SD-56		WB Off-ramp to RTE 5
	Southbound SD-5		SB On-Ramp from Del Mar Heights

	a.m.												p.m.												
FROM HOUR TO HOUR	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	R	R	R	R	R																				R
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																									
Day before designated legal holiday	R	R	R	R	R																				R
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

- **This chart may not be used in conjunction with Charts No.7, 7A, &25.**
- ***Ramps/Connectors must be closed simultaneously.**
- **This chart is to be used in conjunction with Charts No. 9 & 9A for full freeway closure only.**

Detour EB RTE 52 Off-ramp to NB RTE 805 traffic via easterly on RTE 52 to EB RTE 52 Off-ramp to SB RTE 805 thence southerly on RTE 805 to SB RTE 805 Off-ramp to WB RTE 274/Balboa Ave. thence westerly on RTE 274/Balboa Ave. to WB RTE 274 Off-ramp to NB RTE 5.

NOTE: Place PCMS (Portable Changeable Message Sign) on EB RTE 52 at Genesee Ave. – warning public traffic of connector closure/ detour ahead.

Detour WB RTE 52 Off-ramp to NB RTE 805 traffic via westerly on RTE 52 to WB RTE 52 Off-ramp to NB RTE 5 thence northerly on RTE 5 to JCT RTE 5/805.

NOTE: Place PCMS (Portable Changeable Message Sign) on WB RTE 52 at Convoy St. – warning public traffic of connector closure/ detour ahead.

Detour WB RTE 56 Off-ramp to RTE 5 traffic via northerly on El Camino Real to Delmar Heits Rd thence westerly on Del Mar Heights Rd to RTE 5

NOTE: Place PCMS (Portable Changeable Message Sign) on WB RTE 56 at Carmel Creek Rd. – warning public traffic of connector closure/ detour ahead.

KP: 5.423;6.517

F= PD0310U1012301RDI

Chart No. 25
Ramp Lane Requirements

Direction: Westbound SD-52 | Location: WB Off-ramp to NB RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																				R
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																									
Day before designated legal holiday	R	R	R	R	R																				R
Designated legal holidays																									

Legend:

R — Ramp may be closed

(blank) — No work that interferes with public traffic will be allowed

REMARKS:

- **This chart may not be used in conjunction with Charts No.9, 9A & 24.**
- **This chart is to be used in conjunction with Charts No. 7 & 7A for full freeway closure only.**

Detour WB RTE 52 Off-ramp to NB RTE 5 traffic via westerly on RTE 52 to WB RTE 52 Off-ramp to SB RTE 5 thence southerly on RTE 5 to SB RTE 5 Off-ramp to EB RTE 274/Balboa Ave. thence easterly on RTE 274/Balboa Ave. to EB RTE 274/Balboa Ave. Off-ramp to NB RTE 805 thence northerly on RTE 805 to NB RTE 805 Off-ramp to NB RTE 5.

Provide a Secondary Detour via southerly on RTE 5 to SB RTE 5 Off-ramp to Clairemont Dr. thence easterly on Clairemont Dr. to NB Rte 5 On-ramp from Clairemont Dr.

NOTE: Place PCMS (Portable Changeable Message Sign) on WB RTE 52 at Regents Rd. – warning public traffic of ramp/connector closure/ detour ahead.

KP: 0.562

F= PD0310U1012301RDI

Chart No. 26A
Multilane Lane Requirements

Direction: Northbound SD-5

Location: JCT RTE 52 to JCT RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1																				2
Fridays	1	1	1	1	1																				
Saturdays				1	1	1	2	2	3																
Sundays				1	1	1	1	2	2																2
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

Chart No. 26B
Multilane Lane Requirements

Direction: Northbound SD-5

Location: JCT RTE 5/805 to Via De la Valle UC

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
	3	1	1	1	1																				2
Fridays	1	1	1	1	1																				
Saturdays				1	1	2	2	3																	
Sundays				1	1	1	2	2	3																2
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: R 50.19 / R 58.37

F=PD0301U4073100KJ

Chart No. 26C
Multilane Lane Requirements

Direction: Southbound SD-5

Location: JCT RTE 52 to JCT RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1																				2
Fridays	1	1	1	1	1																				
Saturdays				1	1	1	2	3	3																
Sundays				1	1	1	1	2	2																2
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

Chart No. 26D
Multilane Lane Requirements

Direction: Southbound SD-5

Location: JCT RTE 5/805 to Via De La Valle UC

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1																				2
Fridays	1	1	1	1	1																				
Saturdays				1	1	1	2	3																	
Sundays				1	1	1	1	2	3																2
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: R 50.19 / R 58.37

F=PD0301U4073100KJ

Chart No. 26E
Multilane Lane Requirements

Direction: Northbound SD-805	Location: JCT RTE 52 to JCT RTE 5/805

	a.m.												p.m.												
FROM HOUR TO HOUR	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	1	1	1	1	2																				2
Fridays	1	1	1	1	2																				
Saturdays				1	1	2	3	3	3																
Sundays				1	1	1	2	2	2																2
Day before designated legal holiday	1	1	1	1	2																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

- This chart should be used during Special Events at the Del Mar Fair.

KP: 38.06 / 45.87

F=PD0301U4073100KJ

Chart No.26F
Multilane Lane Requirements

Direction: Southbound SD-805

Location: JCT RTE 52 to JCT RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1																				1
Fridays	1	1	1	1	1																				
Saturdays				1	1	1	2	2	3																
Sundays				1	1	1	1	1	2																1
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: 38.06 / 45.87

F=PD0301U4073100KJ

Chart No. 32
Multilane Lane Requirements

Direction: Northbound SD-5 | Location: At NB Off-ramp to RTE 52

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F	1																	3	3	2	
Fridays	F	F	F	F	1																				
Saturdays																									
Sundays																						3	2	2	
Day before designated legal holiday	F	F	F	F	1																				
Designated legal holidays																									

Legend:

F	Freeway may be closed
1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

Close Freeway at NB RTE 5 Off-ramp to EB RTE 52.

Detour NB RTE 5 traffic via northerly on RTE 5 to NB RTE 5 Off-ramp to EB RTE 52 thence easterly on RTE 52 to EB RTE 52 Off-ramp to NB RTE 805 thence northerly on RTE 805 to NB RTE 5.

The following ramps must be closed at the same time as per chart 32A.

NB RTE 5 On-ramp from Gilman Dr.

NB RTE 5 On-ramp from EB La Jolla Village Dr.

NB RTE 5 On-ramp from WB La Jolla Village Dr.

NB RTE 5 On-ramp from Genesee Av.

Full freeway closure is for the erection and removal of falsework only.

NOTE: Place a PCMS (Portable Changeable Message Sign) on NB RTE 5 at Clairemont Mesa Blvd. warning traffic of the freeway closure/detour ahead.

KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

Chart No. 32A
Ramp Lane Requirements

Direction: Northbound SD-5 | Location: See Remarks

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																	R	R	R	
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																						R	R	R	
Day before designated legal holiday	R	R	R	R	R																				
Designated legal holidays																									

Legend:

R — Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

· **This chart is to be used in conjunction with Chart #7 & #25 for full freeway closure only.**

Location	K.P.
All ramps cannot be closed til the freeway has been closed as per chart #32.	
NB On-ramp from Gilman Dr.	R 43.527
NB On-ramp from EB La Jolla Village Dr.	R 45.707
NB On-ramp from WB La Jolla Village Dr.	R 46.015
NB On-ramp from Genesee Av.	R 47.680

F=PD0301U4080300KJ

Chart No. 34
Multilane Lane Requirements

Direction: Northbound SD-805 | Location: At NB Off-ramp to RTE 52

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	F	F	F	F																		3	2	2	
Fridays	F	F	F	F																					
Saturdays																									
Sunday																						3	2	1	
Day before designated legal holiday	F	F	F	F																					
Designated legal holidays																									

Legend:

F	Freeway may be closed
1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:

Close Freeway at NB RTE 805 Off-ramp to WB RTE 52.

Detour NB RTE 805 traffic via northerly on RTE 805 to NB RTE 805 Off-ramp to WB RTE 52 thence westerly on RTE 52 to WB RTE 52 Off-ramp NB RTE 5 thence northerly on RTE 5 to RTE 805.

The following ramps must be closed at the same time as per chart #34A

NB RTE 805 On-ramp from Governor Dr.

NB RTE 805 On-ramp from WB Miramar Rd.

NB RTE 805 On-ramp from EB La Jolla Village Dr.

NB RTE 805 On-ramp from WB Mira Mesa Blvd.

Full freeway closure is for the erection and removal of falsework only.

NOTE: Place a PCMS (Portable Changeable Message Sign) on NB RTE 805 at Clairemont Mesa Blvd. warning traffic of the freeway closure/detour ahead.

KP: 38.06 / 45.87

F=PD0301U4073100KJ

Chart No. 34A
Ramp Lane Requirements

Direction: Northbound SD-805 | Location: See Remarks

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																	R	R	R	
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																						R	R	R	
Day before designated legal holiday	R	R	R	R	R																				
Designated legal holidays																									

Legend:

R — Ramp may be closed

(blank) — No work that interferes with public traffic will be allowed

REMARKS:

Location	K.P.
Ramps may be closed after the freeway has been closed as per chart #34	
NB On-ramp from Gilman Dr.	R 43.527
NB On-ramp from EB La Jolla Village Dr.	R 45.707
NB On-ramp from WB La Jolla Village Dr.	R 46.015
NB On-ramp from Genesee Av.	R 47.680

This chart is to be used in conjunction with chart #34 for full freeway closure only.

F=PD0301U4080300KJ

Chart No. 34B
Ramp Lane Requirements

Direction:		Location:	
	Eastbound SD – 52		EB Off-ramp to NB RTE 805;*
	Westbound SD – 52		WB Off-ramp to NB RTE 805*
	Westbound SD-56		WB Off-ramp to RTE 5
	Southbound SD-5		SB On-Ramp from Del Mar Heights

	a.m.												p.m.												
FROM HOUR TO HOUR	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	R	R	R	R	R																				R
Fridays	R	R	R	R	R																				
Saturdays																									
Sundays																									
Day before designated legal holiday	R	R	R	R	R																				R
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

- **This chart may not be used in conjunction with Charts No.7, 7A, &25.**
- ***Ramps/Connectors must be closed simultaneously.**
- **This chart is to be used in conjunction with Charts No. 9 & 9A for full freeway closure only.**

Detour EB RTE 52 Off-ramp to NB RTE 805 traffic via easterly on RTE 52 to EB RTE 52 Off-ramp to SB RTE 805 thence southerly on RTE 805 to SB RTE 805 Off-ramp to WB RTE 274/Balboa Ave. thence westerly on RTE 274/Balboa Ave. to WB RTE 274 Off-ramp to NB RTE 5.
NOTE: Place PCMS (Portable Changeable Message Sign) on EB RTE 52 at Genesee Ave. – warning public traffic of connector closure/ detour ahead.

Detour WB RTE 52 Off-ramp to NB RTE 805 traffic via westerly on RTE 52 to WB RTE 52 Off-ramp to NB RTE 5 thence northerly on RTE 5 to JCT RTE 5/805.
NOTE: Place PCMS (Portable Changeable Message Sign) on WB RTE 52 at Convoy St. – warning public traffic of connector closure/ detour ahead.

Detour WB RTE 56 Off-ramp to RTE 5 traffic via northerly on El Camino Real to Delmar Heits Rd thence westerly on Del Mar Heights Rd to RTE 5
NOTE: Place PCMS (Portable Changeable Message Sign) on WB RTE 56 at Carmel Creek Rd. – warning public traffic of connector closure/ detour ahead.

KP: 5.423;
6.517

F= PD0310U1012301RDI

Chart No. 36
Ramp Lane Requirements

Direction: Northbound SD-5

Location: NB Off-ramp to Roselle St./Sorrento Valley Rd.

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R																R	R	R	
Fridays	R	R	R	R	R	R																R	R	R	
Saturdays	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	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 48.372

NOTE: Detour NB RTE 5 to Sorrento Valley Road traffic via northerly on RTE 5 to NB RTE 5 off-ramp to Carmel Valley Road thence Easterly on Carmel Valley Road to El Camino Real thence Southerly on El Camino Real to Carmel Mountain Road thence Westerly on Carmel Mountain Road to Sorrento Valley Road.

F=PD0301U4080300KJ

Chart No. 37
Ramp Lane Requirements

Direction: Southbound SD-5

Location: SB On-ramp from Carmel Valley Rd.
SB On-ramp from Roselle St/
Sorrento Valley Rd

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R	R																R	R	R	
Fridays	R	R	R	R	R	R																R	R	R	
Saturdays	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	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 52.769

F=PD0301U4080300KJ

Chart No. 39
Ramp Lane Requirements

Direction: Southbound SD-5 | Location: SB Off-ramp to Gennessee Ave.

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	R	R	R	R	R																	R	R	R	
Fridays	R	R	R	R	R																	R	R	R	
Saturdays	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	
Day before designated legal holiday	R	R	R	R	R	R																R	R	R	
Designated legal holidays																									

Legend:

R — Ramp may be closed

No work that interferes with public traffic will be allowed

REMARKS:

KP: R 47.687

NOTE: : Detour SB RTE 5 to Genesee Ave traffic via southerly on RTE 5 to SB RTE 5 Off-ramp to La Jolla Village Dr thence easterly on La Jolla Village Dr to NB Rte 5 on from La Jolla Village Dr thence Northerly on RTE 5 to NB RTE 5 Off-Ramp to Genesee Ave .

F=PD0301U4080300KJ

Chart No. 43
Street Lane Requirements

Direction: Northbound – Southbound Roselle St. | Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 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																X	X	X	
Saturdays	X	X	X	X	X	X	X	X	X	X												X	X	X	
Sundays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	
Day before designated legal holiday	X	X	X	X	X	X																X	X	X	
Designated legal holidays																									

Legend:

X — Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

Detour NB Roselle St. to SB RTE 5 traffic via easterly on Sorrento Valley Blvd. to Sorrento Valley Rd. thence southerly on Sorrento Valley Rd. to SB RTE 805 On-ramp from Sorrento Valley Rd..

Detour SB Roselle St. traffic via southerly on Roselle St. to SB RTE 5 On-ramp from Roselle St.

F=PD0301U4080300KJ

Chart No. 45
Street Lane Requirements

Direction: Northbound – Southbound Sorrento Valley Rd.

Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																		X	X	
Fridays	X	X	X	X	X																		X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																		X	X	
Designated legal holidays																									

Legend:

X Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

This chart can be used for closing each direction individually and for complete closure of Sorrento Valley rd. under Rte5.

Detour NB Sorrento Valley Road traffic via easterly on Sorrento Valley Blvd. to Vista Sorrento Pkwy. thence southerly on Vista Sorrento Pkwy. to NB RTE 805 On-ramp from Vista Sorrento Pkwy. thence northerly on RTE 805 to EB RTE 56 Off-ramp from RTE 805/5 thence easterly on RTE 56 to El Camino Real thence southerly on El Camino Real to Carmel Mountain Rd. thence westerly on Carmel Mountain Rd. to Sorrento Valley Rd..

Detour SB Sorrento Valley Road traffic via northerly on Sorrento Valley Road to Carmel Mountain Rd. thence easterly on Carmel Mountain Rd. to El Camino Real thence northerly on El Camino Real to RTE 56 thence westerly on Carmel Valley Rd. to SB RTE 5 On-ramp Carmel Valley Rd thence southerly on RTE 5 to RTE 805 thence southerly on RTE 805 to Sorrento Valley Rd.

F=PD0301U4080300KJ

Chart No. 46
Street Lane Requirements

Direction: Eastbound – Westbound Carmel Valley Rd. | Location: Under RTE 5

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																		X	X	
Fridays	X	X	X	X	X																		X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																		X	X	
Designated legal holidays																									

Legend:

X Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

Detour WB Carmel Valley Rd. traffic via to NB RTE 5 thence northerly on RTE 5 to NB RTE 5 Off-ramp to Del Mar Heights Rd thence westerly on Del Mar Heights Rd to SB RTE 5 to thence southerly on RTE 5 to SB RTE 5 Off-Ramp to Carmel Valley Rd.

Detour EB Carmel Valley Rd traffic via southerly on RTE 5 to SB RTE 5 Off-ramp to Genesee Ave thence easterly on Genesee Ave. to NB Rte 5 thence northerly on RTE 5 to NB RTE 5 Off-ramp to Carmel Valley Rd.

F=PD0301U4080300KJ

Chart No. 47
Street Lane Requirements

Direction: Northbound – Southbound Sorrento Valley Ct. | Location: Parallel to RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X																		X	X	
Fridays	X	X	X	X	X																		X	X	
Saturdays	X	X	X	X	X																	X	X	X	
Sundays	X	X	X	X	X																	X	X	X	
Day before designated legal holiday	X	X	X	X	X																		X	X	
Designated legal holidays																									

Legend:

X Street may be closed

No work that interferes with public traffic will be allowed

REMARKS:

Allow local traffic only.

F=PD0301U4080300KJ

Chart No. 48
Multilane Lane Requirements

Direction: Southbound SD-5

Location: JCT RTE 52 to JCT RTE 5/805

FROM HOUR TO HOUR	a.m. 12	1	2	3	4	5	6	7	8	9	10	11	p.m. 12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1																				2
Fridays	1	1	1	1	1																				
Saturdays				1	1	1	2	3	3																
Sundays				1	1	1	2	2	3																2
Day before designated legal holiday	1	1	1	1	1																				
Designated legal holidays																									

Legend:

1	One lane open in direction of travel
2	Two adjacent lanes open in direction of travel
3	Three adjacent lanes open in direction of travel
	No lane closure allowed, Freeway Shoulder may be closed

REMARKS:
* This chart should be used during Special Events at the Del Mar Fair.
KP: R 41.76 / R 50.19

F=PD0301U4073100KJ

10-1.42 PREFABRICATED VERTICAL DRAIN

Prefabricated vertical drains shall be furnished and installed as shown on the plans, as specified in these special provisions, and where designated by the Engineer.

Prefabricated vertical drains shall consist of fabricated vertical drain materials conforming to the following requirements:

A. Saturated test samples of the fabricated drainage wick 0.6-m long, or 0.6-m plus the length of splice if splices are being tested, when suspended vertically shall support a 23 kg mass for a period of 5 minutes without distress or separation.
B. Fabricated drainage wicks shall have the following flow capacity characteristics when test samples are tested in conformance with the test procedure and sequence set forth in these special provisions.

    1. The pressure required to produce and maintain a flow of 3.8 L per minute for a period of 10 minutes, through the sidewalls and out the unsealed end of test samples, shall not exceed 8 kPa when the samples are immersed in water only.
    2. The pressure required to produce and maintain a flow of 3.8 L per minute for a period of 10 minutes, through the sidewalls and out the unsealed end of test samples, shall not exceed 100 kPa when the samples are embedded in a glassbead-aggregate soil matrix.

The test procedure to be used in determining flow capacity characteristics of prefabricated vertical drains shall consist of placing a 350 mm long test sample of the prefabricated vertical drain that has been sealed at one end in a test chamber, centered along its longitudinal axis, such that 300 mm of the sample is exposed to the flow within the chamber and such that the unsealed end of the sample extends out of the top of the chamber. Samples of spliced prefabricated vertical drain shall be placed in the test chamber with 300 mm of the splice exposed to flow within the chamber or, if the splice is less than 300 mm long, the spliced portion of the sample shall be placed in the top portion of the chamber. The inside diameter of the test chamber shall be at least 20 mm greater than the width of the test sample. Water shall be introduced into the test chamber through an inlet centered in the bottom of the chamber. Pressure shall be measured with a strain gage pressure tap installed in the test chamber at approximately mid-depth. Water used in determining flow capacity characteristics shall be potable tap water. Each test sample of spliced and unspliced prefabricated vertical drain shall first be tested for flow capacity when immersed in water only and then for flow capacity when embedded in a glassbead-aggregate soil matrix. The glassbead-aggregate soil matrix shall consist of inert glass beads and soil and shall conform to the following requirements:

A. Gradation:

Sieve Sizes	Percentage Passing
4.75-mm	100
2.36-mm	77
1.18-mm	63
600-µm	42
300-µm	19
150-µm	7
75-µm	3
53-µm	0

B. The material passing the 4.75-mm sieve and retained on the 300-µm sieve shall conform to the provisions in Section 90-2.02B, "Fine Aggregate," of the Standard Specifications. The material passing the 300-µm sieve and retained on the 53-µm sieve shall consist of inert glass beads.
C. The glass beads and soil shall be thoroughly mixed while damp, carefully installed around the test sample of prefabricated vertical drain in the test chamber and compacted by rodding.

Splices in prefabricated vertical drain will be permitted provided the splices are fabricated in a workmanlike manner approved by the Engineer, and the spliced wicks conform to the provisions in these special provisions.

The Contractor shall submit for testing a sample of the unspliced prefabricated vertical drain to be used and 3 samples of proposed splices to the Engineer at least 21 days prior to the installation of the prefabricated vertical drains. The sample of unspliced prefabricated vertical drain shall be at least 3 m long. Samples of spliced prefabricated vertical drain shall be long enough to include the splice plus 0.6-m of unspliced drain on either side of the splice. At the same time, the Contractor shall submit full details of the sequence and method proposed for installation of the prefabricated vertical drains for the Engineer's review and approval. Approval by the Engineer of installation details and methods shall not relieve the Contractor of the responsibility to install prefabricated vertical drains in conformance with the plans and these special provisions.

Prior to installation of the prefabricated vertical drains, the Contractor shall demonstrate that the proposed equipment and methods will produce satisfactory installations of approved prefabricated vertical drains in conformance with the plans and these special provisions. For this purpose, trial prefabricated vertical drains shall be installed at those locations designated by the Engineer. Payment for trial prefabricated vertical drains will be made at the contract price per meter for prefabricated vertical drain. Payment will not be made for unsatisfactory installations of trial prefabricated vertical drain.

Prefabricated vertical drains shall be installed using a driving sleeve. The driving sleeve shall protect the prefabricated vertical drain from tears, cuts, and abrasions during installation and shall be retracted after each prefabricated vertical drain is installed. The cross-section of the driving sleeve shall be of a shape that will produce minimum disturbance of the soil surrounding the installed prefabricated vertical drain and shall not exceed 15,500 mm^2 in area . The tip of the driving sleeve shall cut through the filter fabric layer cleanly without tearing, gathering, folding or otherwise distressing or stressing the fabric.

Prefabricated vertical drains shall not be installed by jetting or impact methods.

Upon written request from the Contractor and when approved by the Engineer, augering or other methods may be used to loosen the soil and permeable material prior to installation of prefabricated vertical drains provided the augering does not penetrate more than 0.3-m into the underlying compressible native soil and does not tear, gather, fold or otherwise disturb or stress the filter fabric layer.

Equipment for installing prefabricated vertical drains shall be plumbed prior to installing each drain and shall not deviate from the vertical more than 30 mm in 3 m during installation of the prefabricated vertical drain. Prefabricated vertical drains that are out of proper location more than 150 mm or are damaged or improperly installed will be rejected. Rejected prefabricated vertical drains may be removed or abandoned in place, at the Contractor's option, except that rejected prefabricated vertical drains which interfere with installation of replacement prefabricated vertical drains, or other acceptable prefabricated vertical drains, shall be removed.

Prefabricated vertical drain locations shall be marked on the ground by the Contractor. The locations of the drainage wicks shall not vary by more than 150 mm from the locations shown on the plans.

Prefabricated vertical drains shall be installed from the working surface to the depth shown on the plans or designated by the Engineer.

The Contractor shall provide the Engineer with suitable means of determining the quantity of prefabricated vertical drain installed at each location and shall provide suitable means for the Engineer to determine the depth of the drain at any given time.

Prefabricated vertical drains shall be cut off neatly at the ground line at the location shown on the plans.

Prefabricated vertical drain will be measured by the meter. The length of prefabricated vertical drain to be paid for will be the length shown on the plans or designated by the Engineer. Prefabricated vertical drain placed in excess of such lengths will not be paid for.

The contract price paid per meter for prefabricated vertical drain shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing prefabricated vertical drains, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.56 CONCRETE STRUCTURES

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

The sixth paragraph in Section 51-1.09, "Placing Concrete," of the Standard Specifications is amended to read:

· Vibrators used to consolidate concrete containing epoxy-coated bar reinforcement or epoxy-coated prestressing steel shall have a resilient covering to prevent damage to the epoxy-coating on the reinforcement or prestressing steel.

Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications is amended by deleting the thirteenth and fourteenth paragraphs.

The fourteenth paragraph in Section 51-1.23, "Payment," of the Standard Specifications is amended by deleting "and injecting epoxy in cracks".

GENERAL

Colored concrete, shown on the plans for the Plantable Geosynthetic Reinforced Retaining Wall, Bridge No. 57-1075M, shall have a color conforming to color No. 30450, of Federal Standard No. 595B

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

When a roughened concrete surface is shown on the plans, the existing concrete surface shall be roughened to a full amplitude of approximately 6 mm by abrasive blasting, water blasting, or mechanical equipment.

Neoprene strip shall be furnished and installed at abutment backwall joint protection and column isolation casing in conformance with the details shown on the plans, the provisions in the Standard Specifications, and these special provisions.

Furnishing and installing neoprene strip shall conform to the requirements for strip waterstops as provided in Section 51-1.145, "Strip Waterstops," of the Standard Specifications, except that the protective board will not be required.

Materials for access opening covers in soffits of new cast-in-place concrete box girder bridges shall conform to the provisions for materials in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

Vertical, horizontal, radial, or normal dimensions shown on the Typical Section in the plans, are for zero percent cross-slope. At the Contractor's option, the Typical Section of superelevated concrete box girder structures with (1) sloping exterior girders, (2) a straight uninterrupted cross slope between edges of deck, and (3) a single profile grade line, may be rotated around the profile grade line in superelevation areas. The horizontal distances between the profile grade line and the edges of deck shall remain unchanged. The planned girder widths and slab thicknesses shall remain unchanged and the interior girder stems shall remain vertical at the planned locations.

FALSEWORK

Falsework shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Attention is directed to "Railroad Relations and Insurance" of these special provisions for additional requirements for falsework over railroads.

Falsework for structures 57-0511, 57-0512, 57-1069F, and 57-1070G, shall be constructed with a 3.7 x 3.7 meter opening to allow large mammal migration.

The first and second paragraph in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications are amended to read:

· The Contractor shall submit to the Engineer working drawings and design calculations for falsework proposed for use at bridges. For bridges where the height of any portion of the falsework, as measured from the ground line to the soffit of the superstructure, exceeds 4.25 m; or where any individual falsework clear span length exceeds 4.85 m; or where provision for vehicular, pedestrian, or railroad traffic through the falsework is made; the drawings shall be signed by an engineer who is registered as a Civil Engineer in the State of California. Six sets of the working drawings and 2 copies of the design calculations shall be furnished. Additional working drawings and design calculations shall be submitted to the Engineer when specified in "Railroad Relations and Insurance" of the special provisions.

· The falsework drawings shall include details of the falsework erection and removal operations showing the methods and sequences of erection and removal and the equipment to be used. The details of the falsework erection and removal operations shall demonstrate the stability of all or any portions of the falsework during all stages of the erection and removal operations.

The seventh paragraph in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications is amended to read:

· In the event that several falsework plans are submitted simultaneously, or an additional plan is submitted for review before the review of a previously submitted plan has been completed, the Contractor shall designate the sequence in which the plans are to be reviewed. In such event, the time to be provided for the review of any plan in the sequence shall be not less than the review time specified above for that plan, plus 2 weeks for each plan of higher priority which is still under review. A falsework plan submittal shall consist of plans for a single bridge or portion thereof. For multi-frame bridges, each frame shall require a separate falsework plan submittal.

Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications is amended by adding the following paragraphs:

· If structural composite lumber is proposed for use, the falsework drawings shall clearly identify the structural composite lumber members by grade (E value), species, and type. The Contractor shall provide technical data from the manufacturer showing the tabulated working stress values of the composite lumber. The Contractor shall furnish a certificate of compliance as specified in Section 6-1.07, "Certificates of Compliance," for each delivery of structural composite lumber to the project site.

· For falsework piles with a calculated loading capacity greater than 900 kN, the falsework piles shall be designed by an engineer who is registered as either a Civil Engineer or a Geotechnical Engineer in the State of California, and the calculations shall be submitted to the Engineer.

The first paragraph in Section 51-1.06A(1), "Design Loads," of the Standard Specifications is amended to read:

· The design load for falsework shall consist of the sum of dead and live vertical loads, and an assumed horizontal load. The minimum total design load for any falsework, including members that support walkways, shall be not less than 4800 N/m^2 for the combined live and dead load regardless of slab thickness.

The eighth paragraph in Section 51-1.06A(1), "Design Loads," of the Standard Specifications is amended to read:

· In addition to the minimum requirements specified in this Section 51-1.06A, falsework for box girder structures with internal falsework bracing systems using flexible members capable of withstanding tensile forces only, shall be designed to include the vertical effects caused by the elongation of the flexible member and the design horizontal load combined with the dead and live loads imposed by concrete placement for the girder stems and connected bottom slabs. Falsework comprised of individual steel towers with bracing systems using flexible members capable of withstanding tensile forces only to resist overturning, shall be exempt from these additional requirements.

The third paragraph in Section 51-1.06B, "Falsework Construction," of the Standard Specifications is amended to read:

· When falsework is supported on piles, the piles shall be driven and the actual bearing value assessed in conformance with the provisions in Section 49, "Piling."

Section 51-1.06B, "Falsework Construction," of the Standard Specifications is amended by adding the following paragraphs:

· For falsework piles with a calculated loading capacity greater than 900 kN, the Contractor shall conduct dynamic monitoring of pile driving and conduct penetration and bearing analyses based on a wave equation analysis. These analyses shall be signed by an engineer who is registered as a Civil Engineer in the State of California and submitted to the Engineer prior to completion of falsework erection.

· Prior to the placement of falsework members above the stringers, the final bracing system for the falsework shall be installed.

Section 51-1.06C, "Removing Falsework," of the Standard Specifications is amended by adding the following paragraph:

· The falsework removal operation shall be conducted in such a manner that any portion of the falsework not yet removed remains in a stable condition at all times.

In addition to the provisions 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 working drawings for specific structures, or portions thereof, shall be as follows:

Structure or Portion of Structure	Total Review Time - Weeks
Route 5/805 Separation (Widen), Bridge No. 57-0512	5
Sorrento Valley Viaduct (Widen), Bridge No. 57-0513R/L	9
S8/S805 Truck Connector, Bridge No. 57-1069F	5

Temporary crash cushion modules, as shown on the plans and conforming to the provisions in "Temporary Crash Cushion Module" of these special provisions, shall be installed at the approach end of temporary railings which are located less than 4.6 m from the edge of a traffic lane. For 2-way traffic openings, temporary crash cushion modules shall be installed at the departing end of temporary railings which are located less than 1.8 m from the edge of a traffic lane.

Welding and Nondestructive Testing

Welding of steel members, except for previously welded splices and except for when fillet welds are used where load demands are less than or equal to 175 N/mm for each 3 mm of fillet weld, shall conform to AWS D1.1 or other recognized welding standard. The welding standard to be utilized shall be specified by the Contractor on the working drawings.

Splices made by field welding of steel beams at the project site shall undergo nondestructive testing (NDT). At the option of the Contractor, either ultrasonic testing (UT) or radiographic testing (RT) shall be used as the method of NDT for each field weld and any repair made to a previously welded splice in a steel beam. Testing shall be performed at locations selected by the Contractor. The length of a splice weld where NDT is to be performed, shall be a cumulative weld length equal to 25 percent of the original splice weld length. The cover pass shall be ground smooth at the locations to be tested. The acceptance criteria shall conform to the requirements of AWS D1.1, Section 6, for cyclically loaded nontubular connections subject to tensile stress. If repairs are required in a portion of the weld, additional NDT shall be performed on the repaired sections. The NDT method chosen shall be used for an entire splice evaluation including any required repairs.

For all field welded splices and previously welded splices, the Contractor shall furnish to the Engineer a letter of certification which certifies that all welding and NDT, including visual inspection, are in conformance with the specifications and the welding standard shown on the approved working drawings. The letter of certification shall be signed by an engineer who is registered as a Civil Engineer in the State of California and shall be provided prior to placing any concrete for which the falsework is being erected to support.

For previously welded splices, the Contractor shall determine and perform all necessary testing and inspection required to certify the ability of the falsework members to sustain the stresses required by the falsework design. This welding certification shall be in writing, shall be signed by an engineer who is registered as a Civil Engineer in the State of California, and shall be provided prior to placing any concrete for which the falsework is being erected to support.

The Contractor's engineer who signs the falsework drawings shall also certify in writing that the falsework is constructed in conformance with the approved drawings and the contract specifications prior to placing concrete. This certification shall include performing any testing necessary to verify the ability of the falsework members to sustain the stresses required by the falsework design. The engineer who signs the drawings may designate a representative to perform this certification. Where falsework contains openings for railroads, vehicular traffic, or pedestrians, the designated representative shall be qualified to perform this work, shall have at least three years of combined experience in falsework design or supervising falsework construction, and shall be registered as a Civil Engineer in the State of California. For other falsework, the designated representative shall be qualified to perform this work and shall have at least three years of combined experience in falsework design or supervising falsework construction. The Contractor shall certify the experience of the designated representative in writing and provide supporting documentation demonstrating the required experience if requested by the Engineer.

EXISTING HINGE TIEDOWNS

Existing hinge tiedowns at bridges shall be removed in conformance with the provisions in Section 15-4, "Bridge Removal," of the Standard Specifications and these special provisions.

The existing hinge tiedowns are located at:

BRIDGE NAME OR NUMBER	HINGE NO.
Southbound 5 Truck Connector,	Hinge 5

Existing hinge tiedowns at bridges shall remain fully tensioned while constructing the supported span in the adjoining frame. All the concrete at the hinge, except concrete above the bridge deck, shall be in place for a period of at least 10 days before detensioning tiedowns.

The hinge tiedowns shall be gradually detensioned and removed before releasing superstructure falsework in the supported span.

Detensioning of each tiedown shall be in increments such that not more than one-half of the total tension force at the tiedown is released before releasing an equal force at the adjacent tiedowns. At no time during detensioning operations shall more than one-sixth of the tension force for the entire hinge be applied eccentrically about the centerline of the structure. Wires, strands, or bars shall be detensioned before cutting them or their anchorages.

Blockouts and recesses for the tiedowns in the existing bridge shall be filled with concrete and finished to match the surrounding surfaces. Embedded fasteners and metal parts shall be removed in conformance with the provisions for form bolts in Section 51-1.18A, "Ordinary Surface Finish," of the Standard Specifications. Buried portions of tiedowns and anchorages shall be removed to a depth of one meter below finished grade except that the limits for removal shall be as specified for embedded fasteners and metal parts when the tiedowns or anchorages are attached to bridge footings or other buried structures shown on the plans.

Full compensation for removing hinge tiedowns and anchorages and for repairing concrete surfaces shall be considered as included in the contract price paid per cubic meter for structural concrete, bridge and no separate payment will be made therefor.

COST REDUCTION INCENTIVE PROPOSALS FOR CAST-IN-PLACE PRESTRESSED BOX GIRDER BRIDGES

Except as provided herein, cast-in-place prestressed box girder bridges shall be constructed in conformance with the details shown on the plans and the provisions in Section 50, "Prestressing Concrete," and Section 51, "Concrete Structures," of the Standard Specifications.

If the Contractor submits cost reduction incentive proposals for cast-in-place prestressed box girder bridges, the proposals shall be in conformance with the provisions in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications and these special provisions.

The Engineer may reject any proposal which, in the Engineer's judgment, may not produce a structure which is at least equivalent to the planned structure.

At the time the cost reduction incentive proposal (CRIP) is submitted to the Engineer, the Contractor shall also submit 4 sets of the proposed revisions to the contract plans, design calculations, and calculations from an independent checker for all changes involved in the proposal, including revisions in camber, predicted deck profile at each construction stage, and falsework requirements to the Office of Structure Design, Documents Unit, P.O. Box 942874, Sacramento, CA 94274-0001 (1801 30th Street, Sacramento, CA 95816), telephone (916) 227-8230. When notified in writing by the Engineer, the Contractor shall submit 12 sets of the CRIP plan revisions and calculations to the Office of Structure Design for final approval and use during construction. The calculations shall verify that all requirements are satisfied. The CRIP plans and calculations shall be signed by an engineer who is registered as a Civil Engineer in the State of California.

The CRIP plans shall be either 279 mm x 432 mm, or 559 mm x 864 mm in size. Each CRIP plan sheet and calculation sheet shall include the State assigned designations for the contract number, bridge number, full name of the structure as shown on the contract plans, and District-County-Route-Kilometer Post. Each CRIP plan sheet shall be numbered in the lower right hand corner and shall contain a blank space in the upper right hand corner for future contract sheet numbers.

Within 3 weeks after final approval of the CRIP plan sheets, one set of the corrected good quality prints on 75-g/m^2 (minimum) bond paper, 559 mm x 864 mm in size, of all CRIP plan sheets prepared by the Contractor for each CRIP shall be furnished to the Office of Structure Design, Documents Unit.

Each CRIP shall be submitted prior to completion of 25 percent of the contract working days and sufficiently in advance of the start of the work that is proposed to be revised by the CRIP to allow time for review by the Engineer and correction by the Contractor of the CRIP plans and calculations without delaying the work. The Contractor shall allow a minimum of 8 weeks for the review of a CRIP. In the event that several CRIPs are submitted simultaneously, or an additional CRIP is submitted for review before the review of a previously submitted CRIP has been completed, the Contractor shall designate the sequence in which the CRIPs are to be reviewed. In this event, the time to be provided for the review of any proposal in the sequence shall be not less than the review time specified herein for that proposal, plus 2 weeks for each CRIP of higher priority which is still under review.

Should the review not be complete by the date specified in the Contractor's CRIP, or such other date as the Engineer and Contractor may subsequently have agreed to in writing and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in review of CRIP plans and calculations, an extension of time commensurate with the delay in completion of the work thus caused will be granted as provided in Section 8-1.07, "Liquidated Damages," of the Standard Specifications except that the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications shall not apply.

Permits and approvals required of the State have been obtained for the structures shown on the plans. Proposals which result in a deviation in configuration may require new permits or approvals. The Contractor shall be responsible for obtaining the new permits and approvals before the Engineer will reach a decision on the proposal. Delays in obtaining permits and approvals will not be reason for granting an extension of contract time.

All proposed modifications shall be designed in conformance with the bridge design specifications and procedures currently employed by the Department. The proposal shall include all related, dependent or incidental changes to the structure and other work affected by the proposal. The proposal will be considered only when all aspects of the design changes are included for the entire structure. Changes, such as but not limited to, additional reinforcement and changes in location of reinforcement, necessary to implement the CRIP after approval by the Engineer, shall be made at the Contractor's expense.

Modifications may be proposed in (1) the thickness of girder stems and deck slabs, (2) the number of girders, (3) the deck overhang dimensions as specified herein, (4) the amount and location of reinforcing steel, (5) the amount and location of prestressing force in the superstructure, and (6) the number of hinges, except that the number of hinges shall not be increased. The strength of the concrete used may be increased but the strength employed for design or analysis shall not exceed 42 MPa.

Modifications proposed to the minimum amount of prestressing force which must be provided by full length draped tendons are subject to the provisions in "Prestressing Concrete" of these special provisions.

No modifications will be permitted in (1) the foundation type, (2) the span lengths or (3) the exterior dimensions of columns or bridge superstructure, except that the overhang dimension from face of exterior girder to the outside edge of roadway deck may be uniformly increased or decreased by 25 percent on each side of the box girder section. Fixed connections at the tops and bottoms of columns shown on the plans shall not be eliminated.

The Contractor shall be responsible for determining construction camber and obtaining the final profile grade as shown on the plans.

The Contractor shall reimburse the State for the actual cost of investigating CRIPs for cast-in-place prestressed box girder bridges submitted by the Contractor. The Department will deduct this cost from any moneys due, or that may become due the Contractor under the contract, regardless of whether or not the proposal is approved or rejected.

DECK CLOSURE POURS

Where a deck closure pour is shown on the plans, reinforcement protruding into the closure space and forms for the closure pour shall conform to the following:

A. During the time of placement of concrete in the deck, other than for the closure pour itself, reinforcing steel which protrudes into the closure space shall be completely free from any connection to the reinforcing steel, concrete, or other attachments of the adjacent structure, including forms. The reinforcing steel shall remain free of any connection for a period of not less than 24 hours following completion of the pour.
B. Forms for the closure pour shall be supported from the superstructure on both sides of the closure space.

SLIDING BEARINGS

Sliding bearings consisting of elastomeric bearing pads lubricated with grease and covered with sheet metal shall conform to the following requirements:

A. Grease shall conform to the requirements of Military Specification: MIL-S-8660. A uniform film of grease shall be applied to the upper surface of the pads prior to placing the sheet metal.
B. Sheet metal shall be commercial quality galvanized sheet steel. The sheet metal shall be smooth and free of kinks, bends, or burrs.
C. Construction methods and procedures shall prevent grout or concrete seepage into the sliding bearing assembly.

ELASTOMERIC BEARING PADS

Elastomeric bearing pads shall conform to the provisions in Section 51-1.12H, "Elastomeric Bearing Pads," of the Standard Specifications.

DECK CRACK TREATMENT

The Contractor shall use all means necessary to minimize the development of shrinkage cracks.

The Contractor shall remove all equipment and materials from the deck and clean the surface as necessary for the Engineer to measure the surface crack intensity. Surface crack intensity will be determined by the Engineer after completion of concrete cure, prior to prestressing, and prior to the release of falsework. In any 50-m^2 portion of deck within the limits of the new concrete deck, should the intensity of cracking be such that there are more than 5 m of cracks whose width at any location exceeds 0.5-mm, the deck shall be treated with methacrylate resin. The area of deck to be treated shall have a width that extends for the entire width of new deck inside the concrete barriers and a length that extends at least 1.5 m beyond the furthest single continuous crack outside the 50-m^2 portion, measured from where that crack exceeds 0.5-mm in width, as determined by the Engineer.

Deck crack treatment shall consist of test sealing, and furnishing and applying methacrylate resin in conformance with the requirements of these special provisions. If grinding operation is required, deck treatment shall take place after grinding.

Prior to the start of deck treatment work, the Contractor shall submit for approval by the Engineer, a program for public safety associated with the use of methacrylate resin. The program shall identify materials, equipment, and methods to be used. The Contractor shall not perform deck treatment work, other than that specifically authorized in writing by the Engineer, until the program has been approved.

If the measures being taken by the Contractor are inadequate to provide for public safety associated with use of methacrylate resin, the Engineer will direct the Contractor to revise the operations and the public safety program. Directions for revisions will be in writing and will specify the items in which the Contractor's program is inadequate. No further deck treatment shall be performed until public safety measures are adequate, and a revised program for public safety has been approved.

The Engineer will notify the Contractor of the approval or rejection of any submitted or revised program for public safety associated with the use of methacrylate resin within 10 working days of receipt of the final submitted program.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised program for public safety associated with the use of methacrylate resin, nor for any delays to the work due to the Contractor's failure to submit an acceptable program for public safety associated with the use of methacrylate resin. If the Engineer does not review or approve the program submitted by the Contractor within the time specified and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the program for public safety, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Materials

The material used for treating the deck shall be a low odor, high molecular weight methacrylate resin. Prior to adding initiator, the resin shall have a maximum volatile content of 30 percent when tested in conformance with the requirements in ASTM Designation: D 2369, and shall conform to the following:

PROPERTY	TEST METHOD	REQUIREMENT
Viscosity mPa·s, maximum, (Brookfield RVT with UL adaptor, 50 RPM at 25°C)	ASTM D 2196	0.025
Specific Gravity minimum, at 25°C	ASTM D 1475	0.90
Flash Point °C, minimum	ASTM D 3278	82
Vapor Pressure mm Hg, maximum, at 25°C	ASTM D 323	1.0
Tack-free time minutes, maximum at 25°C	California Test 551	400
PCC Saturated Surface-Dry Bond Strength MPa, minimum at 24 hours and 21±1°C	California Test 551	3.5
* Test shall be performed prior to adding initiator.		

A Material Safety Data Sheet shall be furnished prior to use for each shipment of high molecular weight methacrylate resin.

The promoter and initiator, if supplied separately from the resin, shall not be mixed directly with each other. Containers of promoters and initiators shall not be stored together in a manner that will allow leakage or spillage from one to contact the containers or material of the other.

Testing

The Contractor shall allow 14 days for sampling and testing by the Engineer of the high molecular weight methacrylate resin prior to proposed use.

The Contractor shall treat a test area within the project limits of approximately 50 m^2 at a location approved by the Engineer. Conditions during the test treatment shall be similar to those expected on the deck. Equipment used in the test shall be similar to those used for the deck treating operations. If the test area is on the traveled way, traffic shall not be allowed on the treated test area until (1) the treated surface is tack free (non-oily), (2) the sand cover adheres sufficiently to resist brushing by hand, and (3) the coefficient of friction of the deck is at least 0.35 when tested in conformance with the requirements in California Test 342.

Should the above requirements for traffic use not be met, the Contractor shall suspend treating of bridge decks until another test area is treated and complies with the requirements.

Construction

Prior to deck treatment with methacrylate resin, the bridge deck surface shall be cleaned by abrasive blasting and all loose material shall be blown from visible cracks using high-pressure air. Concrete curing seals shall be cleaned from the deck surface to be treated, and the deck shall be dry when blast cleaning is performed. If the deck surface becomes contaminated at any time prior to placing the penetrating sealer, the deck surface shall be cleaned by abrasive blasting.

Equipment shall be fitted with suitable traps, filters, drip pans, or other devices as necessary to prevent oil or other deleterious material from being deposited on the deck.

Where abrasive blasting is being performed within 3 m of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the abrasive and the surface being treated. The removal shall be by a vacuum attachment operating concurrently with the abrasive blasting operation.

The relative humidity shall be less than 90 percent at time of treatment.

A compatible promoter/initiator system shall be capable of providing a resin gel time of not less than 40 minutes nor more than 1.5 hours at the temperature of application. Gel time shall be adjusted to compensate for the changes in temperature throughout treatment application.

The quantity of resin mixed with promoter and initiator shall be limited to 20 L at a time for manual application.

Machine application of the resin shall be performed by using a two-part resin system using a promoted resin for one part and an initiated resin for the other part. This two-part resin system shall be combined at equal volumes to the spray bars through separate positive displacement pumps. Combining of the 2 components shall be by either static in-line mixers or by external intersecting spray fans. The pump pressure at the spray bars shall not be great enough to cause appreciable atomization of the resin. Compressed air shall not be used to produce the spray. A shroud shall be used to enclose the spray bar apparatus. Hand held spray apparatus shall not be used.

The Contractor shall allow methacrylate resin to be applied only to the specified area. Barrier rails, joints, and drainage facilities shall be adequately protected to prevent contamination by the treatment material. Contaminated items shall be repaired at the Contractor's expense.

The prepared area shall be dry and the surface temperature shall be less than or equal to 38°C when the resin is applied. The rate of application of promoted/initiated resin shall be approximately 2.5 square meters per liter, ± 0.1 square meter per liter.

The deck surfaces to be treated shall be flooded with resin, allowing penetration into the concrete and filling of all cracks. The treatment shall be applied within 5 minutes after complete mixing. A significant increase in viscosity shall be cause for rejection. Excess material shall be redistributed by squeegees or brooms within 10 minutes after application.

After the resin has been applied, at least 20 minutes shall elapse before applying sand. The sand shall be commercial quality dry blast sand. Ninety-five percent of the sand shall pass the 2.36-mm sieve, and 95 percent shall be retained on the 850-µm sieve. The sand shall be applied at a rate of one kilogram per square meter, ± 0.1 kilogram per square meter.

Excess sand shall be removed from the deck surface by vacuuming or sweeping prior to opening to traffic.

Traffic shall not be allowed on the treated area until (1) the treated surface is tack free (non-oily), (2) the sand cover adheres sufficiently to resist brushing by hand, and (3) the coefficient of friction of the deck is at least 0.35 when tested in conformance with the requirements in California Test 342.

10-1.62 STRUCTURE APPROACH SLABS (TYPE R)

Structure approach slabs (Type R) shall consist of removing portions of existing structures, existing pavement and base including asphalt concrete surfacing, portland cement concrete pavement, subsealing material, and cement treated base and constructing new reinforced concrete approach slabs at structure approaches as shown on the plans and in conformance with these special provisions.

GENERAL

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

Where pavement subsealing has been performed under existing approach slabs, the subsealing material shall be removed for its full depth. Where removal of cement treated base is required to construct the approach slab, the entire thickness of the cement treated base shall be removed.

Voids between the new reinforced structure approach slab and the base material remaining in place that are caused by removal of subsealing material or cement treated base shall be filled, at the option of the Contractor, with aggregate base (approach slab) or structure approach slab concrete.

The Contractor shall establish a grade line for new approach slabs which shall provide a smooth profile grade. The profile grade will be subject to the approval of the Engineer.

The Contractor shall schedule his operations so that the pavement and base materials removed during a work period shall be replaced, in that same work period, with approach slab concrete that shall be cured for at least 6 hours prior to the time the lane is to be opened to public traffic as designated in "Maintaining Traffic" of these special provisions. In the event the existing pavement and base materials are removed and the Contractor is unable to construct, finish, and cure the new approach slab by the time the lane is to be opened to public traffic, the excavation shall be filled with a temporary roadway structural section as specified in this section, "Structure Approach Slabs (Type R)."

At locations where the removal of existing materials and approach slab construction is not required to be completed within the same work period, the requirements for "Temporary Roadway Structural Section" shall not apply. The Contractor shall have the option of:

A. Curing the approach slab concrete for not less than 5 days prior to opening to public traffic, or
B. Constructing the approach slab using concrete with a non-chloride Type C chemical admixture and curing the approach slab concrete at least 6 hours prior to opening to public traffic.

TEMPORARY ROADWAY STRUCTURAL SECTION

A standby quantity of asphalt concrete and aggregate base, equal to the quantity of pavement removed during the work shift, shall be provided at the project site for construction of a temporary roadway structural section where existing approaches to structures are being replaced. The temporary structural section shall be maintained and later removed as a first order of work when the Contractor is able to construct and cure the approach slab within the prescribed time limit. The temporary structural section shall consist of 90-mm thick layer of asphalt concrete over aggregate base.

The aggregate base for the temporary structural section shall conform to the requirements specified under "Aggregate Base (Approach Slab)" of these special provisions.

The asphalt concrete for the temporary structural section shall be produced from commercial quality aggregates and asphalt binder. The grading of the aggregate shall conform to the 19-mm maximum medium grading in Section 39-2.02, "Aggregate," of the Standard Specifications and the asphalt binder shall conform to the requirements of liquid asphalt SC-800 in Section 93, "Liquid Asphalts," of the Standard Specifications. The amount of asphalt binder to be mixed with the aggregate shall be approximately 0.3-percent less than the optimum bitumen content as determined by California Test 367.

Aggregate base and asphalt concrete for the temporary structural section shall be spread and compacted 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 asphalt concrete may each be spread and compacted in one layer. The finished surface of the asphalt concrete shall not vary more than 15 mm from the lower edge of a 3.6-m straightedge placed parallel with the centerline and shall match the elevation of the existing concrete pavement and structure along the joints between the existing pavement and structure and the temporary surfacing.

The material from the removed temporary structural section shall be disposed of in conformance with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications except that removed aggregate base may be stockpiled at the project site and reused for construction of another temporary structural section. When no longer required, standby material or stockpiled material for construction of temporary structural sections shall be removed and 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.

REMOVING PORTIONS OF EXISTING STRUCTURES

Attention is directed to "Existing Highway Facilities" of these special provisions.

REMOVING EXISTING PAVEMENT AND BASE MATERIALS

The outline of portland cement concrete to be removed shall be sawed full depth with a power-driven concrete saw.

The outlines of excavations in asphalt concrete shall be cut on a neat line to a minimum depth of 75 mm with a power-driven concrete saw or wheel-type rock cutting excavator before any asphalt concrete material is removed. These excavations shall be permanently or temporarily backfilled to conform to the grade of the adjacent pavement prior to 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, the surface of the concrete to be removed shall not be impacted within 0.5-m of the pavement to remain in place. Removing existing pavement and base materials shall be performed without damage to the adjacent structure or pavement that is to remain in place. Damage to the structure or to the pavement that is to remain in place shall be repaired in conformance with the provisions in Section 7-1.11, "Preservation of Property," of the Standard Specifications.

Materials removed 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 base material remaining in-place, after removing the existing pavement and base materials to the required depth, shall be graded uniformly, watered, and compacted. The finished surface of the base material at any point shall not extend above the grade approved by the Engineer.

Areas of the base material that are low as a result of over excavation shall be filled, at the Contractor's expense, with structure approach slab concrete at the time and in the same operation that the new concrete is placed.

AGGREGATE BASE (APPROACH SLAB)

The aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete shall 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 shall conform to the 19-mm maximum grading specified in Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications.

Aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete shall be spread and compacted by methods that will produce a well-compacted, uniform base, free from pockets of coarse or fine material. The aggregate base shall be watered and compacted to the grade approved by the Engineer. Where the required thickness of aggregate base is 200 mm or less, the base may be spread and compacted in one layer. Where the required thickness of aggregate base is more than 200 mm, the base shall be spread and compacted in 2 or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 200 mm. The finished surface of the base material at any point shall not extend above the grade approved by the Engineer. Areas of the base material that are lower than the grade approved by the Engineer, shall be filled with structure approach slab concrete at the time and in the same operation that the new concrete is placed.

STRUCTURE APPROACH SLAB

Reinforced concrete approach slabs shall conform to the provisions for approach slabs in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Concrete for use in approach slabs shall contain not less than 400 kg of cement per cubic meter.

Steel components of abutment ties including plates, nuts, washers, and rods shall conform to the provisions in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

The steel angles at the concrete barrier joint shall conform to the provision in Section 75-1.03, "Miscellaneous Metal," of the Standard Specifications.

Approach slab concrete that requires a minimum curing period of 6 hours shall be constructed using a non-chloride Type C chemical admixture. Mineral admixture will not be required in this concrete.

Portland cement for use in concrete using a non-chloride Type C chemical admixture shall be Type II Modified, Type II Prestress, or Type III. Type II Modified and Type III cement shall conform to the provisions in Section 90-2.01, "Cement," of the Standard Specifications. Type II Prestress cement shall conform to the requirements of Type II Modified cement, except the mortar containing the portland cement to be used and Ottawa sand, when tested in conformance with California Test 527, shall not contract in air more than 0.053-percent.

The non-chloride Type C chemical admixture shall be approved by the Engineer and shall conform to the requirements in ASTM Designation: C 494 and Section 90-4, "Admixtures," of the Standard Specifications.

The concrete with non-chloride Type C chemical admixture shall be prequalified prior to placement in conformance with the provisions for prequalification of concrete specified by compressive strength in Section 90-9.01, "General," of the Standard Specifications and the following:

A. Immediately after fabrication of the 5 test cylinders, the cylinders shall be stored in a temperature medium of 21 ± 1.5°C until the cylinders are tested.
B. The 6-hour average strength of the 5 test cylinders shall not be less than 5.85 MPa. No more than 2 test cylinders shall have a strength of less than 5.5 MPa.

Building paper shall be commercial quality No. 30 asphalt felt.

Polyvinyl chloride (PVC) conduit used to encase the abutment tie rod shall be commercial quality.

Bar reinforcement or abutment tie rods in drilled holes shall be bonded in conformance with 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 top surface of approach slabs shall be finished in conformance with the provisions in Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications. The finished top surface shall not vary more than 6 mm from the lower edge of a 3.6-m straightedge placed parallel with the centerline. Edges of slabs shall be edger finished.

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

Approach slabs shall be cured with pigmented curing compound (1) in conformance with the provisions for curing structures in Section 90-7.01B, "Curing Compound Method," of the Standard Specifications. The minimum curing period as specified herein shall be considered to begin at the start of discharge of the last truck load of concrete to be used in the slab. Fogging of the surface with water after the curing compound has been applied will not be required. Should the film of curing compound be damaged from any cause before the approach slab is opened to public traffic, the damaged portion shall be repaired immediately with additional compound, at the Contractor's expense. Damage to the curing compound after the approach slab is opened to public traffic shall not be repaired.

If the ambient temperature is below 18°C during the curing period, an insulating layer or blanket shall cover the surface. The insulation layer or blanket shall have an R-value rating given in the table below. At the Contractor's option, a heating tent may be used in lieu of or in combination with the insulating layer or blanket:

Temperature range during curing period	R-value, minimum
13°C to 18°C	1
7°C to 13°C	2
4°C to 7°C	3

Tests to determine the coefficient of friction of the final textured surface will be made only if the Engineer determines by visual inspection that the final texturing may not have produced a surface having the specified coefficient of friction. Tests to determine the coefficient of friction will be made after the approach slab is opened to public traffic, but not later than 5 days after concrete placement. The coefficient of friction will be measured by California Test 342. Portions of completed concrete surfaces that are found to have a coefficient of friction less than 0.35 shall be ground or grooved parallel to the center line in conformance with the provisions for bridge decks in Section 42, "Groove and Grind Pavement," of the Standard Specifications.

JOINTS

Hardboard and expanded polystyrene shall conform to the provisions in Section 51-1.12D, "Sheet Packing, Preformed Pads and Board Fillers," of the Standard Specifications.

Type AL joint seals shall conform to the provisions in 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.

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 miscellaneous metal, and Type AL joint seals shall be considered as included in the contract price paid per cubic meter for structural concrete, approach slab (Type R) and no separate payment will be made therefor.

Full compensation for aggregate base (approach slab) shall be considered as included in the contract price paid per cubic meter for structural concrete, approach slab (Type R) and no separate payment will be allowed therefor.

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 meter 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 meter for structural concrete, approach slab (Type R) and no separate payment will be made therefor.

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	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	1100		
3	022634	TEMPORARY FENCE (TYPE ESA)	M	1450		
4	022635	TEMPORARY CHAIN LINK FENCE (TYPE CL-1.8, SLATTED)	M	2700		
5	022636	TEMPORARY CHAIN LINK GATE	EA	11		
6	073029	600 MM TEMPORARY CULVERT	M	130		
7	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
8	074020	WATER POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	
9 (S)	074023	TEMPORARY EROSION CONTROL	M2	353 000		
10	074028	TEMPORARY FIBER ROLL	M	33 000		
11	022637	TEMPORARY GRAVEL BAG	EA	5500		
12	022638	TEMPORARY CONCRETE WASHOUT	EA	20		
13	022639	TEMPORARY CONSTRUCTION ENTRANCE	EA	35		
14 (S)	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
15 (S)	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
16	120120	TYPE III BARRICADE	EA	20		
17 (S)	120149	TEMPORARY PAVEMENT MARKING (PAINT)	M2	125		
18 (S)	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	M	19 900		
19	022640	TRAFFIC PLASTIC DRUM	EA	520		
20 (S)	120200	FLASHING BEACON (PORTABLE)	EA	2		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21 (S)	120300	TEMPORARY PAVEMENT MARKER	EA	5120		
22	128650	PORTABLE CHANGEABLE MESSAGE SIGN	EA	6		
23	129000	TEMPORARY RAILING (TYPE K)	M	25 600		
24	129100	TEMPORARY CRASH CUSHION MODULE	EA	460		
25	022641	TEMPORARY CRASH CUSHION (ADIEM)	EA	12		
26	150206	ABANDON CULVERT	EA	11		
27	150227	ABANDON PIPELINE	EA	3		
28	150605	REMOVE FENCE	M	4674		
29	150662	REMOVE METAL BEAM GUARD RAILING	M	2910		
30	150676	REMOVE CABLE RAILING	M	150		
31	022642	REMOVE TRAFFIC STRIPE (YELLOW)	M2	1030		
32	150717	REMOVE TRAFFIC STRIPE AND PAVEMENT MARKING	M2	9970		
33	150730	REMOVE CHANNELIZERS	EA	170		
34	150742	REMOVE ROADSIDE SIGN	EA	28		
35	150760	REMOVE SIGN STRUCTURE	EA	14		
36	150805	REMOVE CULVERT	EA	5		
37	150820	REMOVE INLET	EA	7		
38	048771	RECONSTRUCT TYPE 9 BRIDGE RAILING	M	2		
39	152320	RESET ROADSIDE SIGN	EA	20		
40 (S)	152394	RELOCATE SIGN STRUCTURE	EA	2		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	152410	RELOCATE WATER METER	EA	1		
42	152604	MODIFY INLET	EA	5		
43 (S)	152641	MODIFY SIGN STRUCTURE	EA	11		
44 (S)	153155	COLD PLANE ASPHALT CONCRETE PAVEMENT (75 MM MAXIMUM)	M2	51		
45	153210	REMOVE CONCRETE	M3	540		
46	153213	REMOVE CONCRETE (STRUCTURE)	M3	1630		
47	153214	REMOVE CONCRETE CURB	M	91		
48	153216	REMOVE CONCRETE CURB AND SIDEWALK	M	570		
49	153221	REMOVE CONCRETE BARRIER	M	1980		
50	153222	REMOVE CONCRETE ISLAND (PORTIONS)	M3	130		
51	155003	CAP INLET	EA	12		
52	157561	BRIDGE REMOVAL (PORTION), LOCATION A	LS	LUMP SUM	LUMP SUM	
53	157562	BRIDGE REMOVAL (PORTION), LOCATION B	LS	LUMP SUM	LUMP SUM	
54	157563	BRIDGE REMOVAL (PORTION), LOCATION C	LS	LUMP SUM	LUMP SUM	
55	157564	BRIDGE REMOVAL (PORTION), LOCATION D	LS	LUMP SUM	LUMP SUM	
56	160101	CLEARING AND GRUBBING	LS	LUMP SUM	LUMP SUM	
57	170101	DEVELOP WATER SUPPLY	LS	LUMP SUM	LUMP SUM	
58	190101	ROADWAY EXCAVATION	M3	719 600		
59	190103	ROADWAY EXCAVATION (TYPE Y) (AERIALLY DEPOSITED LEAD)	M3	10 600		
60	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
61 (F)	192003	STRUCTURE EXCAVATION (BRIDGE)	M3	4193		
62 (F)	192020	STRUCTURE EXCAVATION (TYPE D)	M3	108		
63 (F)	192037	STRUCTURE EXCAVATION (RETAINING WALL)	M3	64 887		
64 (F)	193003	STRUCTURE BACKFILL (BRIDGE)	M3	1520		
65 (F)	048772	ISOLATION CASING BACKFILL	M3	479		
66 (F)	193013	STRUCTURE BACKFILL (RETAINING WALL)	M3	37 063		
67 (F)	193031	PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	M3	2885		
68	193114	SAND BACKFILL	M3	1920		
69	194001	DITCH EXCAVATION	M3	270		
70	048773	PLANTABLE GEOSYNTHETIC REINFORCED WALL	M2	19 672		
71 (S)	048774	STONE COLUMN (1.1 M)	M	24 100		
72 (S)	048775	SOIL CEMENT	M3	21 300		
73 (S)	048776	PREFABRICATED VERTICAL DRAIN	M	48 500		
74 (S)	200001	HIGHWAY PLANTING	LS	LUMP SUM	LUMP SUM	
75 (S)	200101	IMPORTED TOPSOIL	M3	4120		
76 (S)	022643	FIBER (HYDROSEED)	KG	21 700		
77 (S)	022644	TEMPORARY EROSION CONTROL (TYPE 2)	M2	118 000		
78 (S)	022645	TEMPORARY EROSION CONTROL (TYPE 3)	M2	98 000		
79 (S)	022646	COMPOST (HYDROSEED)	KG	23 000		
80 (S)	203026	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	10		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81 (S)	022648	PURE LIVE SEED (HYDROSEED 1)	KG	130		
82 (S)	022649	PURE LIVE SEED (HYDROSEED 2)	KG	180		
83 (S)	022650	PURE LIVE SEED (HYDROSEED 3)	KG	11		
84 (S)	022651	PURE LIVE SEED (SEEDING 1)	KG	0.7		
85 (S)	022652	PURE LIVE SEED (SEEDING 2)	KG	40		
86 (S)	022653	STABILIZING EMULSION (HYDROSEED)	KG	2000		
87 (S)	022654	COMMERCIAL FERTILIZER (HYDROSEED)	KG	350		
88 (S)	022655	BONDED FIBER MATRIX (HYDROSEED)	KG	2350		
89 (S)	204030	TRANSPLANT TREE	EA	8		
90 (S)	204099	PLANT ESTABLISHMENT WORK	LS	LUMP SUM	LUMP SUM	
91 (S)	208000	IRRIGATION SYSTEM	LS	LUMP SUM	LUMP SUM	
92	022656	40 MM WATER METER	EA	1		
93	022657	50 MM WATER METER	EA	4		
94	208732	250 MM CORRUGATED HIGH DENSITY POLYETHYLENE PIPE CONDUIT	M	320		
95	208910	EXTEND 250 MM CONDUIT	M	20		
96	250401	CLASS 4 AGGREGATE SUBBASE	M3	640		
97	260201	CLASS 2 AGGREGATE BASE	M3	62 600		
98	374002	ASPHALTIC EMULSION (FOG SEAL COAT)	TONN	14		
99	390102	ASPHALT CONCRETE (TYPE A)	TONN	23 200		
100	390171	ASPHALT CONCRETE BASE (TYPE A)	TONN	50 700		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	394001	PLACE ASPHALT CONCRETE DIKE	M	9000		
102	394002	PLACE ASPHALT CONCRETE (MISCELLANEOUS AREA)	M2	1840		
103	397001	ASPHALTIC EMULSION (PAINT BINDER)	TONN	12		
104	401000	CONCRETE PAVEMENT	M3	33 000		
105	404092	SEAL PAVEMENT JOINT	M	52 200		
106	048777	FURNISH STEEL PILING (HP 305 X 110)	M	6010		
107	048778	DRIVE STEEL PILE (HP 305 X 110)	EA	260		
108 (S)	490657	600 MM CAST-IN-DRILLED-HOLE CONCRETE PILING	M	1439		
109 (S)	490659	1.0 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	84		
110 (S)	490663	1.5 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	1200		
111 (S)	048779	1.7 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	157		
112 (S)	048780	2.3 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	775		
113 (S)	048781	2.6 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	146		
114 (S)	490673	3.0 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	244		
115 (S)	048782	3.2 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	360		
116 (S)	048783	3.8 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	76		
117 (S)	048784	1.5 M PERMANENT STEEL CASING	M	1200		
118 (S)	048785	1.7 M PERMANENT STEEL CASING	M	157		
119 (S)	048786	2.3 M PERMANENT STEEL CASING	M	775		
120 (S)	048787	2.6 M PERMANENT STEEL CASING	M	146		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
121 (S)	048788	3.2 M PERMANENT STEEL CASING	M	360		
122 (S)	048789	3.8 M PERMANENT STEEL CASING	M	76		
123 (S)	048790	1.2 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	202		
124 (S)	048791	1.5 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	26		
125 (S)	048792	2.1 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	482		
126 (S)	048793	2.4 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	141		
127 (S)	048794	3.0 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	300		
128 (S)	048795	3.6 M CAST-IN-DRILLED-HOLE CONCRETE PILING (ROCK SOCKET)	M	71		
129 (S)	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
130 (S)	500010	PRESTRESSING	LS	LUMP SUM	LUMP SUM	
131 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	290		
132 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	M3	29 020		
133 (F)	510060	STRUCTURAL CONCRETE, RETAINING WALL	M3	886		
134 (F)	048796	RIVER ROCK ARCHITECTURAL TEXTURE	M2	11 856		
135 (F)	022658	STUCCO ARCHITECTURAL TEXTURE	M2	228		
136 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	876		
137 (F)	510087	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	M3	20		
138 (F)	510126	CLASS 2 CONCRETE (MINOR STRUCTURE)	M3	52		
139 (F)	510133	CLASS 2 CONCRETE (RETAINING WALL)	M3	13 880		
140 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	M3	647		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141 (F)	510800	PAVING NOTCH EXTENSION	M3	3		
142 (F)	511046	HEAVY BLAST TEXTURE	M2	110		
143 (F)	511063	FRACTURED FIN TEXTURE	M2	50		
144	511106	DRILL AND BOND DOWEL	M	67		
145 (S)	512255	FURNISH PRECAST PRESTRESSED CONCRETE BULB-TEE GIRDER (30 M -35 M)	EA	4		
146 (S)	512256	FURNISH PRECAST PRESTRESSED CONCRETE BULB-TEE GIRDER (35 M -40 M)	EA	8		
147 (S)	048799	ERECT PRECAST PRETENSIONED GIRDER	EA	12		
148	513553	RETAINING WALL (MASONRY WALL)	M2	27		
149 (S)	518050	PTFE BEARING	EA	8		
150 (S)	518051	PTFE SPHERICAL BEARING	EA	36		
151 (S)	519117	JOINT SEAL (MR 30 MM)	M	45		
152 (S)	519120	JOINT SEAL (MR 15 MM)	M	46		
153 (S)	519124	JOINT SEAL ASSEMBLY (MR 60 MM)	M	46		
154 (S)	519125	JOINT SEAL ASSEMBLY (MR 70 MM)	M	13		
155 (S)	519126	JOINT SEAL ASSEMBLY (MR 80 MM)	M	24		
156 (S)	519129	JOINT SEAL ASSEMBLY (MR 101 MM - 160 MM)	M	25		
157 (S)	519130	JOINT SEAL ASSEMBLY (MR 161 MM - 240 MM)	M	62		
158 (S)	519131	JOINT SEAL ASSEMBLY (MR 241 MM - 320 MM)	M	12		
159 (S)	519142	JOINT SEAL (MR 40 MM)	M	64		
160 (S)	519144	JOINT SEAL (MR 50 MM)	M	63		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
161 (S)	048800	JOINT SEAL (MR 50MM - TYPE B)	M	60		
162 (S-F)	520102	BAR REINFORCING STEEL (BRIDGE)	KG	8 991 500		
163 (S-F)	520103	BAR REINFORCING STEEL (RETAINING WALL)	KG	806 723		
164 (S-F)	550110	COLUMN CASING	KG	8700		
165 (S-F)	048801	ISOLATION CASING	KG	232 300		
166 (F)	560203	FURNISH SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	KG	1721		
167 (S-F)	560204	INSTALL SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	KG	1511		
168 (F)	560208	FURNISH SIGN STRUCTURE (TUBULAR)	KG	177 365		
169 (S-F)	560209	INSTALL SIGN STRUCTURE (TUBULAR)	KG	177 365		
170 (F)	560213	FURNISH SIGN STRUCTURE (LIGHTWEIGHT)	KG	5560		
171 (S-F)	560214	INSTALL SIGN STRUCTURE (LIGHTWEIGHT)	KG	5560		
172 (F)	560218	FURNISH SIGN STRUCTURE (TRUSS)	KG	63 178		
173 (S-F)	560219	INSTALL SIGN STRUCTURE (TRUSS)	KG	61 078		
174 (S)	561008	760 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	50		
175 (S)	561009	920 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	150		
176 (S)	561010	1070 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	210		
177 (S)	561012	1220 MM CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	M	25		
178	562002	METAL (BARRIER MOUNTED SIGN)	KG	1120		
179	566011	ROADSIDE SIGN - ONE POST	EA	78		
180	566012	ROADSIDE SIGN - TWO POST	EA	14		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181	568001	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA	10		
182 (F)	597601	PREPARE AND STAIN CONCRETE	M2	11 855		
183	620909	450 MM ALTERNATIVE PIPE CULVERT	M	37		
184	620913	600 MM ALTERNATIVE PIPE CULVERT	M	6720		
185	620919	750 MM ALTERNATIVE PIPE CULVERT	M	470		
186	620924	900 MM ALTERNATIVE PIPE CULVERT	M	78		
187	620930	1050 MM ALTERNATIVE PIPE CULVERT	M	21		
188	022659	300 MM POLYVINYL CHLORIDE PIPE (CL200)	M	44		
189	022660	400 MM POLYVINYL CHLORIDE PIPE (CL200)	M	190		
190	022661	1350 MM HIGH DENSITY POLYETHYLENE PIPE (TYPE S)	M	100		
191	022662	HIGH DENSITY POLYETHYLENE PIPE LINING GROUT	M3	80		
192	650077	750 MM REINFORCED CONCRETE PIPE	M	330		
193	650084	1200 MM REINFORCED CONCRETE PIPE	M	60		
194	650576	600 MM REINFORCED CONCRETE PIPE (CLASS V)	M	88		
195	650578	750 MM REINFORCED CONCRETE PIPE (CLASS V)	M	28		
196	650582	1050 MM REINFORCED CONCRETE PIPE (CLASS V)	M	26		
197	650586	1350 MM REINFORCED CONCRETE PIPE (CLASS V)	M	43		
198	655367	JACKED 600 MM REINFORCED CONCRETE PIPE (CLASS III)	M	20		
199	670657	2275 MM STRUCTURAL STEEL PLATE PIPE (3.56 MM THICK)	M	27		
200	690267	200 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN	M	21		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
201	690271	300 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN	M	37		
202	690282	600 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN (3.51 MM THICK)	M	35		
203	690284	750 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN (2.01 MM THICK)	M	25		
204	690290	1050 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN (2.77 MM THICK)	M	12		
205	690297	450 MM BITUMINOUS COATED CORRUGATED STEEL PIPE DOWNDRAIN (3.51 MM THICK)	M	56		
206	703233	GRATED LINE DRAIN	M	770		
207	703282	900 MM CORRUGATED STEEL PIPE RISER (1.63 MM THICK)	M	6		
208	703587	500 MM WELDED STEEL PIPE (9.53 MM THICK)	M	35		
209	705568	750 MM HEAVY DUTY AUTOMATIC DRAINAGE GATE	EA	2		
210	022663	1200 MM HEAVY DUTY AUTOMATIC DRAINAGE GATE	EA	4		
211	705954	300 MM GATE VALVE	EA	4		
212	022664	400 MM BUTTERFLY VALVE	EA	2		
213	707470	600 MM PRECAST CONCRETE PIPE RISER	M	5		
214	707479	900 MM REINFORCED CONCRETE PIPE RISER	M	27		
215	721008	ROCK SLOPE PROTECTION (LIGHT, METHOD B)	M3	53		
216	721011	ROCK SLOPE PROTECTION (BACKING NO. 2, METHOD B)	M3	59		
217	721022	ROCK SLOPE PROTECTION (1T, METHOD B)	M3	230		
218	721508	CONCRETED-ROCK SLOPE PROTECTION (LIGHT, METHOD A)	M2	57		
219 (F)	721810	SLOPE PAVING (CONCRETE)	M3	12		
220	727905	MINOR CONCRETE (CHANNEL LINING)	M3	700		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	729010	ROCK SLOPE PROTECTION FABRIC	M2	360		
222	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	M3	1100		
223	022665	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION) COLORED CONCRETE	M3	880		
224	731517	MINOR CONCRETE (GUTTER)	M3	26		
225	731530	MINOR CONCRETE (TEXTURED PAVING)	M2	11 500		
226 (F)	750001	MISCELLANEOUS IRON AND STEEL	KG	31 701		
227 (S-F)	750496	MISCELLANEOUS METAL (RESTRAINER - PIPE TYPE)	KG	5200		
228 (S-F)	750498	MISCELLANEOUS METAL (RESTRAINER - CABLE TYPE)	KG	14 530		
229 (S-F)	750501	MISCELLANEOUS METAL (BRIDGE)	KG	700		
230 (S-F)	750505	BRIDGE DECK DRAINAGE SYSTEM	KG	26 220		
231 (S)	800391	CHAIN LINK FENCE (TYPE CL-1.8)	M	5850		
232 (S)	802590	1.8 M CHAIN LINK GATE (TYPE CL-1.8)	EA	33		
233 (S)	802596	3.7 M CHAIN LINK GATE (TYPE CL-1.8)	EA	11		
234	820107	DELINEATOR (CLASS 1)	EA	250		
235	820110	MILEPOST MARKER	EA	46		
236	820118	GUARD RAILING DELINEATOR	EA	170		
237 (S)	832003	METAL BEAM GUARD RAILING (WOOD POST)	M	1300		
238 (F)	833125	CONCRETE BARRIER (TYPE 25)	M	5211		
239 (F)	833126	CONCRETE BARRIER (TYPE 25A)	M	1251		
240	833127	CONCRETE BARRIER (TYPE 25B)	M	180		

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
241 (S)	839521	CABLE RAILING	M	5700		
242 (S)	839553	END SECTION	EA	28		
243 (S)	839565	TERMINAL SYSTEM (TYPE SRT)	EA	35		
244 (S)	839568	TERMINAL ANCHOR ASSEMBLY (TYPE SFT)	EA	20		
245 (S)	839569	TERMINAL ANCHOR ASSEMBLY (TYPE CA)	EA	10		
246 (S)	839570	RETURN SECTION	EA	10		
247 (S)	839591	CRASH CUSHION, SAND FILLED	EA	6		
248 (S)	839603	CRASH CUSHION (ADIEM)	EA	1		
249	839701	CONCRETE BARRIER (TYPE 60)	M	6500		
250 (F)	839702	CONCRETE BARRIER (TYPE 60A)	M	518		
251	839703	CONCRETE BARRIER (TYPE 60C)	M	750		
252	839704	CONCRETE BARRIER (TYPE 60D)	M	3280		
253	839705	CONCRETE BARRIER (TYPE 60E)	M	1670		
254 (S)	840515	THERMOPLASTIC PAVEMENT MARKING	M2	3090		
255 (S)	840561	100 MM THERMOPLASTIC TRAFFIC STRIPE	M	18 300		
256 (S)	840563	200 MM THERMOPLASTIC TRAFFIC STRIPE	M	5560		
257 (S)	840564	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 3.66 M - 0.92 M)	M	4760		
258 (S)	022666	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 11.00M-3.5M)	M	350		
259 (S)	840656	PAINT TRAFFIC STRIPE (2-COAT)	M	208 000		
260	BLANK					

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
261 (S)	850101	PAVEMENT MARKER (NON-REFLECTIVE)	EA	35 700		
262 (S)	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	17 500		
263 (S)	860251	SIGNAL AND LIGHTING (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
264 (S)	860252	SIGNAL AND LIGHTING (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
265 (S)	860460	LIGHTING AND SIGN ILLUMINATION	LS	LUMP SUM	LUMP SUM	
266 (S)	022667	CHANGEABLE MESSAGE SIGN SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
267 (S)	022668	CHANGEABLE MESSAGE SIGN SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
268 (S)	022669	CHANGEABLE MESSAGE SIGN SYSTEM (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
269 (S)	022670	CHANGEABLE MESSAGE SIGN SYSTEM (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
270 (S)	022671	IRRIGATION CONTROLLER ENCLOSURE CABINET (TYPE A)	EA	3		
271 (S)	022672	IRRIGATION CONTROLLER ENCLOSURE CABINET (TYPE B)	EA	3		
272 (S)	860761	LIGHTING CONDUIT (BRIDGE)	M	3190		
273 (S)	860797	ELECTRIC SERVICE (IRRIGATION)	LS	LUMP SUM	LUMP SUM	
274 (S)	860931	TRAFFIC MONITORING STATION (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
275 (S)	860932	TRAFFIC MONITORING STATION (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
276 (S)	860933	TRAFFIC MONITORING STATION (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
277 (S)	860934	TRAFFIC MONITORING STATION (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
278 (S)	860935	TRAFFIC MONITORING STATION (LOCATION 5)	LS	LUMP SUM	LUMP SUM	
279 (S)	022673	FIBER OPTIC COMMUNICATION SYSTEM	LS	LUMP SUM	LUMP SUM	
280 (S)	861101	RAMP METERING SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	

ENGINEER'S ESTIMATE
11-0301U4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
281 (S)	861102	RAMP METERING SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
282 (S)	861103	RAMP METERING SYSTEM (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
283	022674	REMOVE RAMP METERING SYSTEM	LS	LUMP SUM	LUMP SUM	
284	993013	150 MM FIRE HYDRANT ASSEMBLY	EA	1		
285	BLANK					
286	070012A	ELECTRONIC MOBILE DAILY DIARY COMPUTER SYSTEM DATA DELIVERY	LS	LUMP SUMP	LUMP SUM	
287	404094	SEAL LONGITUDINAL ISOLATION JOINT	M	32 400		
288	208305	WATER METER (BUILDING)	EA	1		
289	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID: _____