

DEPARTMENT OF TRANSPORTATION
DES-OE MS #43
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Sacramento, CA 95816



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September 2, 2003

11-SD-15,56-M30.6/M35.4,
14.3/15.0
11-080904
ACIM-015-4(191)N
CMSTPL-6211(032)N

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN DIEGO COUNTY IN SAN DIEGO ON ROUTE 15 FROM 0.9 KM SOUTH OF ROUTE 56/15 SEPARATION OVERCROSSING TO 0.1 KM NORTH OF CAMINO DEL NORTE UNDERCROSSING AND ON ROUTE 56 FROM 0.5 KM WEST TO 0.2 KM EAST OF ROUTE 56/15 SEPARATION.

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 September 18, 2003.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 31, 85, 88, 270, 272, 273, 274, 276, 284, 289, 292, 293, 296, 298, 300, 301, 302, 310, 356, 357, 358, 359, 362, 372, 528, 769, 770, 838, 839, 840, 881, 882, 892, 926 and 964 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 106A, 106B are added. Half-sized copies of the added sheets are attached for addition to the project plans.

In the Special Provisions, Section 1, "SPECIFICATIONS AND PLANS," in the "AMENDMENTS TO JULY 1999 STANDARD SPECIFICATIONS," the formula in the third paragraph of the amendment for Section 49-1.08, "PILE DRIVING ACCEPTANCE CRITERIA," is revised as follows:

$$"R_u = (7 * (E_r)^{1/2} * \log_{10} (0.83 * N)) - 550"$$

In the Special Provisions, Section 1, "SPECIFICATIONS AND PLANS," in the third paragraph, the item of work, "Signal, lighting and electrical," of the fifth subparagraph that reads, "Phase III shall consist of the following work:," is deleted and is added to the items of work in the seventh subparagraph that reads, "Phase IV shall consist of the following work:."

In the Special Provisions, Section 5-1.20, "SOUND CONTROL REQUIREMENTS," the third paragraph is deleted.

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In the Special Provisions, Section 10-1.03, "TEMPORARY EROSION CONTROL (SEEDED)," subsection "APPLICATION," the table in subparagraph "A" of the first paragraph is replaced as follows:

Material	Kilograms Per Hectare (Slope Measurement)
Fiber	1000
Compost	1000
Non-Legume Seed	13
Stabilizing Emulsion (Solids)	200

In the Special Provisions, Section 10-1.03, "TEMPORARY EROSION CONTROL (SEEDED)," subsection "APPLICATION," the table in subparagraph "C" of the first paragraph is replaced as follows:

Material	Kilograms Per Hectare (Slope Measurement)
Fiber	800
Compost	1200
Commercial Fertilizer	25
Stabilizing Emulsion (Solids)	200

In the Special Provisions, Section 10-1.13, "TIME-RELATED OVERHEAD," subparagraph "D," of the twelfth paragraph is deleted.

In the Special Provisions, Section 10-1.18, "MAINTAINING TRAFFIC," Lane Closure Chart No. 26 is replaced as attached and Lane Closure Charts No. 26A, 26B and 26C are added as attached.

In the Special Provisions, Section 10-1.19, "CLOSURE REQUIREMENTS AND CONDITIONS," subsection, "CLOSURE SCHEDULE," the ninth paragraph is deleted.

In the Special Provisions, Section 10-1.34, "EARTHWORK," is replaced as attached.

In the Special Provisions, Section 10-1.42, "IRRIGATION CROSSOVERS," is replaced as attached.

In the Special Provisions, Section 10-1.43, "IRRIGATION CROSSOVERS," is deleted.

In the Special Provisions, Section 10-1.495, "IMPORTED TOPSOIL," is added as attached, prior to Section, 10-1.50, "AGGREGATE BASE."

In the Special Provisions, Section 10-1.83, "MISCELLANEOUS METAL (BRIDGE)," is replaced as attached.

In the Special Provisions, Section 10-3.01, "DESCRIPTION," add the following paragraph after the first paragraph:

"Conduit in the abutment at Camino Del Norte UC (Bridge No. 57-0930) for the barrier transfer machine guidance wire shall conform to the provisions in Section 86, "Signals, Lighting and Electrical Systems," of the Standard Specifications and these special provisions. Full compensation for said conduit shall be considered as included in the various types of work involved and no separate payment will be allowed therefor."

Addendum No. 1
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September 2, 2003

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In the Proposal and Contract, the Engineer's Estimate Items 59, 161, 164, 166 and 192 are revised and Item 255 is deleted and Items 256 and 257 are added.

To Proposal and Contract book holders:

Replace pages 5, 11, 12 and 15 of the Engineer's Estimate in the Proposal with the attached revised pages 5, 11, 12 and 15 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

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

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

Inform subcontractors and suppliers as necessary.

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

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

Sincerely,

ORIGINAL SIGNED BY

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

Attachments

**Chart No. 26
HOV Lane Requirements**

Direction: Northbound – Southbound SD-15					Location: RTE 15 HOV Lanes																					
	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	X	X	X	X	X							1	1	1	1								X	X	X	X
Fridays	X	X	X	X	X							1	1	1	1								X	X	X	X
Saturdays	X	X	X	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
Day before designated legal holiday	X	X	X	X	X							1	1	1	1								X	X	X	X
Designated legal holidays	X	X	X	X	X							1	1	1	1								X	X	X	X

Legend:

- One HOV-lane open in direction of travel
- HOV Lanes may be closed
- No lane closure allowed

REMARKS:

1. Each request for any closure of or on the HOV lanes MUST be submitted to the District Traffic Manager for approval.
2. Each request for use of the HOV Lanes MUST be submitted to the Transportation Management Center (TMC) 2 weeks in advance for approval. If the work is cancelled for any reason, the TMC MUST be notified as soon as possible.
3. The Contractor and/or any Caltrans person responsible for overseeing the work/contract is responsible for maintaining safety on the HOV Lanes during usage. Caltrans maintenance units and/or CHP units may be on the lanes when the lanes are not open to the motoring public.
4. The HOV Lanes are used as an alternate route when a major incident occurs. All contractor and Caltrans personnel, vehicles, and equipment must be able to vacate the HOV Lanes within approximately 20 minutes of being notified by the TMC.
5. It is imperative that the responsible Caltrans person and/or contractor have cellular phones and/or two-way radios so the TMC has contact with them at all times while they are on the lanes.
6. A list of contractor personnel, along with the responsible Caltrans personnel, MUST be on file in the TMC including pager and cellular phone number information **prior** to approval for use of the HOV lanes for the work.
7. When closing the HOV lanes completely (all lanes), all entrance gates on the HOV Lanes (Gate 1, Gate 2, and Gate 5) will be closed prior to the beginning of work. It is the responsibility of the contractor and/or Caltrans personnel on the HOV lanes to assist the TMC in this procedure. Once this is done, the work may proceed. (Map of HOV lane gates and locations attached)
8. After completing work for the day/night and prior to leaving the I-15 HOV Express Lanes, all HOV Gates **MUST** be re-opened. Contact TMC personnel by radio or phone (858-467-3090 or 3089) to complete this procedure.

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CONTRACT NO. 11-080904
REPLACED PER ADDENDUM NO. 1 DATED SEPTEMBER 2, 2003

**Chart No. 26A
HOV Lane Requirements**

Direction: Northbound – Southbound SD-15											Location: RTE 15 HOV Lanes														
	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	X	X	X	X	X																				
Fridays																						X	X	X	X
Saturdays	X	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	X
Day before designated legal holiday																									
Designated legal holidays																									

Legend:

- HOV Lanes may be closed
- No lane closure allowed

REMARKS:

**This chart may be used one time only.
This chart is not valid when a Holiday falls on a Monday or Friday.**

9. Each request for any closure of or on the HOV lanes MUST be submitted to the District Traffic Manager for approval.
10. Each request for use of the HOV Lanes MUST be submitted to the Transportation Management Center (TMC) 2 weeks in advance for approval. If the work is cancelled for any reason, the TMC MUST be notified as soon as possible.
11. The Contractor and/or any Caltrans person responsible for overseeing the work/contract is responsible for maintaining safety on the HOV Lanes during usage. Caltrans maintenance units and/or CHP units may be on the lanes when the lanes are not open to the motoring public.
12. The HOV Lanes are used as an alternate route when a major incident occurs. All contractor and Caltrans personnel, vehicles, and equipment must be able to vacate the HOV Lanes within approximately 20 minutes of being notified by the TMC.
13. It is imperative that the responsible Caltrans person and/or contractor have cellular phones and/or two-way radios so the TMC has contact with them at all times while they are on the lanes.
14. A list of contractor personnel, along with the responsible Caltrans personnel, MUST be on file in the TMC including pager and cellular phone number information **prior** to approval for use of the HOV lanes for the work.
15. When closing the HOV lanes completely (all lanes), all entrance gates on the HOV Lanes (Gate 1, Gate 2, and Gate 5) will be closed prior to the beginning of work. It is the responsibility of the contractor and/or Caltrans personnel on the HOV lanes to assist the TMC in this procedure. Once this is done, the work may proceed. (Map of HOV lane gates and locations attached)
16. After completing work for the day/night and prior to leaving the I-15 HOV Express Lanes, all HOV Gates **MUST** be re-opened. Contact TMC personnel by radio or phone (858-467-3090 or 3089) to complete this procedure.

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**Chart No. 26B
HOV Lane Requirements**

Direction: Southbound SD-15						Location: SB Off-ramp to HOV Lanes																			
	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	X	X	X	X	X																				
Fridays													X	X	X	X	X	X	X	X	X	X	X	X	
Saturdays	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	
Day before designated legal holiday																									
Designated legal holidays																									

Legend:

- Ramp may be closed
- No lane closure allowed

REMARKS:

**This chart may be used one time only.
This chart is not valid when a Holiday falls on a Monday or Friday.**

17. Each request for any closure of or on the HOV lanes MUST be submitted to the District Traffic Manager for approval.
18. Each request for use of the HOV Lanes MUST be submitted to the Transportation Management Center (TMC) 2 weeks in advance for approval. If the work is cancelled for any reason, the TMC MUST be notified as soon as possible.
19. The Contractor and/or any Caltrans person responsible for overseeing the work/contract is responsible for maintaining safety on the HOV Lanes during usage. Caltrans maintenance units and/or CHP units may be on the lanes when the lanes are not open to the motoring public.
20. The HOV Lanes are used as an alternate route when a major incident occurs. All contractor and Caltrans personnel, vehicles, and equipment must be able to vacate the HOV Lanes within approximately 20 minutes of being notified by the TMC.
21. It is imperative that the responsible Caltrans person and/or contractor have cellular phones and/or two-way radios so the TMC has contact with them at all times while they are on the lanes.
22. A list of contractor personnel, along with the responsible Caltrans personnel, MUST be on file in the TMC including pager and cellular phone number information **prior** to approval for use of the HOV lanes for the work.
23. When closing the HOV lanes completely (all lanes), all entrance gates on the HOV Lanes (Gate 1, Gate 2, and Gate 5) will be closed prior to the beginning of work. It is the responsibility of the contractor and/or Caltrans personnel on the HOV lanes to assist the TMC in this procedure. Once this is done, the work may proceed. (Map of HOV lane gates and locations attached)
24. After completing work for the day/night and prior to leaving the I-15 HOV Express Lanes, all HOV Gates **MUST** be re-opened. Contact TMC personnel by radio or phone (858-467-3090 or 3089) to complete this procedure.

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**Chart No. 26C
HOV Lane Requirements**

Direction: Northbound	SD-15	Location: NB On-ramp from HOV Lanes
	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	X X X X X X X X X X X	
Fridays		X X X X
Saturdays	X X X X X X X X X X 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 X X X
Day before designated legal holiday		
Designated legal holidays		

Legend:

- Ramp may be closed
- No lane closure allowed

REMARKS:

**This chart may be used one time only.
This chart is not valid when a Holiday falls on a Monday or Friday.**

25. Each request for any closure of or on the HOV lanes MUST be submitted to the District Traffic Manager for approval.
26. Each request for use of the HOV Lanes MUST be submitted to the Transportation Management Center (TMC) 2 weeks in advance for approval. If the work is cancelled for any reason, the TMC MUST be notified as soon as possible.
27. The Contractor and/or any Caltrans person responsible for overseeing the work/contract is responsible for maintaining safety on the HOV Lanes during usage. Caltrans maintenance units and/or CHP units may be on the lanes when the lanes are not open to the motoring public.
28. The HOV Lanes are used as an alternate route when a major incident occurs. All contractor and Caltrans personnel, vehicles, and equipment must be able to vacate the HOV Lanes within approximately 20 minutes of being notified by the TMC.
29. It is imperative that the responsible Caltrans person and/or contractor have cellular phones and/or two-way radios so the TMC has contact with them at all times while they are on the lanes.
30. A list of contractor personnel, along with the responsible Caltrans personnel, MUST be on file in the TMC including pager and cellular phone number information **prior** to approval for use of the HOV lanes for the work.
31. When closing the HOV lanes completely (all lanes), all entrance gates on the HOV Lanes (Gate 1, Gate 2, and Gate 5) will be closed prior to the beginning of work. It is the responsibility of the contractor and/or Caltrans personnel on the HOV lanes to assist the TMC in this procedure. Once this is done, the work may proceed. (Map of HOV lane gates and locations attached)
32. After completing work for the day/night and prior to leaving the I-15 HOV Express Lanes, all HOV Gates **MUST** be re-opened. Contact TMC personnel by radio or phone (858-467-3090 or 3089) to complete this procedure.

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10-1.34 EARTHWORK

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

BLASTING

Project blasting shall conform to Sections 7-1.10, "Use of Explosives," and 19-2.03, "Blasting," of the Standard Specifications and these special provisions.

PRE-BLAST CONDITION SURVEY

The Contractor shall make and document a pre-blast survey of any nearby buildings, structures, or utilities within 100 meters or which may potentially be at risk from blasting damage. The survey method used shall be acceptable to the Contractor's insurance company. The Contractor shall make the pre-blast survey within 45 calendar days in advance of the planned commencement or resumption of blasting operations and pre-blast records shall be made available to the Engineer for review. Occupants of the local buildings shall be notified by the Contractor prior to the beginning of the blast. The pre-blast survey shall, as a minimum, contain the following:

- A. The name of the person making the inspection.
- B. The names of the property owner and occupants, the addresses of the property, the date and time of the inspection.
- C. A complete description of the structure(s) or other improvement(s) including culverts and bridges.
- D. A detailed interior inspection with each interior room (including attic and basement spaces) designated and described. All existing conditions of the walls, ceiling and floor such as cracks, holes and separations shall be noted.
- E. A detailed exterior inspection fully describing the existing conditions of all foundations, walls, roofs, doors, windows, and porches.
- F. A detailed listing, inspection and documentation of existing conditions of garages, outbuildings, sidewalks and driveways.
- G. A detailed listing of highway signposts, light fixtures and overhead power lines.
- H. A survey of any wells or other private water supplies including total depth and existing water surface levels.

The Contractor shall perform a re-survey of all locations whenever blasting operations are either terminated or suspended for a period in excess of 45 calendar days.

The documentation may consist of either a written report, or videotape with voice narration. The videotape, if used, must include date and time displayed on the image.

The Contractor shall provide copies of the pre-blast inspection report or videotape documentation to the Engineer at the time that the blasting plan is submitted.

The Contractor shall control project blasting so that vibration, flyrock, ground/vibration motion, and air noise levels do not cause damage to nearby structures including highway sign posts, light fixtures and parked vehicles, undue annoyance to nearby residents, or danger to employees on the project. Contractor shall use controlled blasting techniques and designs and shall coordinate the traffic control during blasting operation. The Contractor shall be responsible for ally damage resulting from blasting.

VIBRATION CONTROL AND MONITORING

When blasting within 450 meters of buildings, structures, or utilities that may be subject to damage from blast-induced ground vibrations, the Contractor shall control ground vibrations by the use of properly designed delay sequences and allowable charge weights per delay. Allowable charge weights per delay shall be based on vibration levels that will not cause damage. The Contractor shall perform trial blasts to select allowable charge weights per delay by measuring vibration levels. The Contractor shall select proper control method to limit overbreak. The trial blasts shall be carried out in conformance with the blasting test section requirements, modified as required to limit ground vibrations to a level which will not cause damage. The blasting test section requirements require that two seismographs be used, one placed on the end of the shot and one placed at 90 degrees behind the shot to establish vibration levels and their relation to the measurement location. The Contractor shall have the final responsibility to control overbreak.

Whenever vibration damage to adjacent structures is possible, the Contractor shall monitor each blast with an approved seismograph located, as approved, between the blast area and the closest structure subject to blast damage. The seismograph used shall be capable of recording particle velocities for three mutually perpendicular components of vibration in the range generally found with controlled blasting.

Peak particle velocity of each component shall not exceed 50 mm/sec. The Contractor shall employ a qualified vibration specialist to establish safe vibration limits. The vibration specialist shall also interpret the seismograph records to ensure that the seismograph data are utilized effectively in the control of the basting operations with respect to the existing structures. The vibration specialist used shall be subject to the Engineer's approval.

Data recorded for each shot shall be furnished to the Engineer prior to the next blast and shall include the following information:

- A. Identification of instrument used.
- B. Name of qualified observer and interpreter.
- C. Distance and direction of recording station from blast area.
- D. Type of ground at recording station and material on which instrument is sitting.
- E. Maximum particle velocity in each component.
- F. A dated and signed copy of seismograph readings record.
- G. Blast Identification by numerical and chronological sequence.
- H. Location (referenced to stationing), date and time of blast.
- I. Type of material blasted.
- J. Number of holes.
- K. Diameter, depth and spacing of holes.
- L. Height or length of stemming.
- M. Types of explosives used.
- N. Type of caps used and delay periods used.
- O. Total amount of explosives used.
- P. Maximum amount of explosives per delay period of 9 milliseconds or greater.
- Q. Powder factor (pounds of explosive per cubic yard of material blasted).
- R. Method of firing type.
- S. Weather conditions (including wind direction).
- T. Direction and distance to nearest structure or structures of concern.
- U. Type and method of instrumentation.
- V. Location and placement of instruments.
- W. Measures taken to limit air noise and fly rock.
- X. Any unusual circumstances or occurrences during blast.
- Y. Measures Taken to limit overbreak
- Z. Name of contractor.
- AA. Name and signature of responsible blaster.

At the Contractor's option, shot designs may be based upon scaled distance following the chart below. The scaled distance is the ratio of distance in feet from the blast site to the site to be protected to the square root of the maximum explosive weight used for each delay of 9 milliseconds or more.

Blast Design Table

Distance to site to be protected	Scaled distance factor
0 to 91 meters	22.57 m/kg ^{1/2}
91 to 1,524 meters	24.94 m/kg ^{1/2}
1,524 meters	29.4 m/kg ^{1/2}

AIR BLAST AND NOISE CONTROL

The Contractor shall install an air blast monitoring system between the main blasting area and the nearest structure subject to blast damage or annoyance. The equipment used to make the air blast measurements shall be the type specifically manufactured for that purpose. Noise levels shall be held below 125 dBc (decibels) at the nearest structure or designated location. The Contractor shall use appropriate blast hole patterns, detonation systems, and stemming to prevent venting of blasts and to minimize air blast and noise levels produced by the blasting operations. The dBc levels shall be lowered if it proves too high based on damage or complaints. The Contractor shall furnish a permanent, signed and dated record of the noise level measurement to the Engineer immediately after each shot.

FLYROCK CONTROL

Before the firing of any blast in areas where flying rock may result in personnel injury or unacceptable damage to property, parked vehicles or the work, the Contractor shall cover the rock to be blasted with approved blasting mats, soil, or other equally serviceable material, to prevent flyrock.

If flyrock leaves the construction site and lands on private property all blasting operations will cease until a qualified consultant, hired by the Contractor, reviews the site and determines the cause and solution to the flyrock problem. Before blasting proceeds, a written report shall be submitted by the Contractor to the Engineer for approval.

VIDEO RECORDINGS OF BLAST

Videotape recordings will be taken of each blast. The tapes or sections of tapes will be indexed in a manner to properly identify each blast. At the option of the Engineer, copies of videotapes of blasts will be furnished on a weekly basis.

The contractor shall submit a plan to the Engineer detailing how he/she proposes to control blasting. No blasting operation, including drilling, shall start until the Engineer has reviewed and approved this blasting plan in accordance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The Contractor shall allow not less than 2 weeks for the Engineer to complete the review of the Plan. In the event that additional Blasting Control Plans are required, the Contractor shall provide at least 2 weeks for the review of each additional plan. If the Engineer fails to complete this review within the provided time allowed, and if, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of this delay, an extension of the time commensurate with the delay will be granted as provided in Section 8-1.07, "Liquidated Damages," of the Standard Specifications. Approval of the Contractor's Blasting Control Plan or blasting procedures shall not relieve the Contractor of any of his responsibility under the contract for assuring the complete safety of his/her operations or for the successful completion of the work in conformity with the requirements of the plans and specifications. The Blasting Plan shall contain the following data as a minimum:

- A. Blast Identification by numerical and chronological sequence.
- B. Location (referenced to stationing), date and time of blast.
- C. Blast Layout plan with drill pattern and initiation sequencing.
- D. Typical Cross-sections through zone to be blasted. Groundwater table must be depicted if present within the prism to be blasted.
- E. An initiation sequencing diagram depicting the actual firing time of each delay.
- F. Type of material blasted.
- G. Number of holes.
- H. Diameter, depth and spacing of holes.
- I. Height or length of stemming.
- J. Types of explosives used.
- K. Type of caps used and delay periods used.
- L. Total amount of explosives used.
- M. Maximum amount of explosives per delay period of 9 milliseconds or greater.
- N. Powder factor (pounds of explosive per cubic yard of material blasted).
- O. Method of firing type.
- P. Weather conditions (including wind direction).
- Q. Direction and distance to nearest structure or structures of concern.
- R. Type and method of instrumentation.
- S. Location and placement of instruments.
- T. Instrumentation records and calculations for determination of ground motion particle velocity or for charge size based on scaled distance.
- U. Measures taken to limit air noise and fly rock.
- V. Any unusual circumstances or occurrences during blast.
- W. Measures to limit overbreak
- X. Name of contractor.
- Y. Name and signature of responsible blaster.

The Contractor shall keep accurate records of each blast. Blasting shall remain available to the Engineer at all times and shall contain the following data as a minimum:

- A. Blast Identification by numerical and chronological sequence.
- B. Location (referenced to stationing), date and time of blast.
- C. Type of material blasted.
- D. Number of holes.
- E. Diameter, depth and spacing of holes.
- F. Height or length of stemming.
- G. Types of explosives used.
- H. Type of caps used and delay periods used.
- I. Total amount of explosives used.
- J. Maximum amount of explosives per delay period of 9 milliseconds or greater.
- K. Powder factor (pounds of explosive per cubic yard of material blasted).
- L. Method of firing type.
- M. Weather conditions (including wind direction).
- N. Direction and distance to nearest structure or structures of concern.
- O. Type and method of instrumentation.
- P. Location and placement of instruments.
- Q. Instrumentation records and calculations for determination of ground motion particle velocity or for charge size based on scaled distance.
- R. Measures taken to limit air noise and fly rock.
- S. Any unusual circumstances or occurrences during blast.
- T. Measures to limit overbreak
- U. Name of contractor.
- V. Name and signature of responsible blaster.

BLASTING GUARDS

The Contractor shall provide sufficient blasting guards and station them around the blasting area during blasting to assure that people and structures are not endangered. Traffic during blasting shall be controlled by the Contractor.

Blasting operations may be suspended by the Engineer for any of the following:

- A. Safety precautions, monitoring equipment and traffic control measures are inadequate.
- B. Ground motion particle velocity or air noise exceeds the limits specified.
- C. Blasting Control Plans have not been approved.
- D. Required records are not being kept.
- E. Excessive outbreak as determined by the Engineer.

Suspension of blasting operations shall in no way relieve the Contractor of his/her responsibilities under the terms of this contract. Blasting operations shall not resume until modifications have been made to correct the conditions that resulted in the suspension.

Blasting complaints shall be accurately recorded by the Contractor as to complainant, address, date, time, nature of the complaint, name of person receiving the complaint, the complaint investigation conducted, and the disposition of the complaint. Contractor shall make complaint available to the Engineer, as soon as practical, but no later than at the beginning of the following day's shift.

Full compensation for blasting shall be considered as included in the contract price paid per cubic meter for roadway excavation and no additional payment will be allowed therefor.

Structure excavation for Carmel Mountain Road Overcrossing (Replace) (Bridge No. 57-1125) will be measured and paid for as structure excavation (bridge) (carmel).

Structure excavation for Route 56/15 Separation (Replace) (Bridge No. 57-1130) and Camino Del Norte Undercrossing (Widen) (Bridge No. 57-0930) will be measured and paid for as structure excavation (bridge).

Structure backfill for Carmel Mountain Road Overcrossing (Replace) (Bridge No. 57-1125) will be measured and paid for as structure backfill (bridge) (carmel).

Structure backfill for Route 56/15 Separation (Replace) (Bridge No. 57-1130) and Camino Del Norte Undercrossing (Widen) (Bridge No. 57-0930) will be measured and paid for as structure backfill (bridge).

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

Where a portion of the existing surfacing is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 50 mm before removing the surfacing. Full compensation for cutting the existing surfacing shall be considered as included in the contract price paid per cubic meter for roadway excavation and no additional compensation will be allowed therefor.

Attention is directed to "Existing Highway Facilities" of these special provisions concerning residue from saw cutting.

Reinforcement or metal attached to reinforced concrete rubble placed in embankments shall not protrude above the grading plane. Prior to placement within 0.6-m below the grading plane of embankments, reinforcement or metal shall be trimmed to no greater than 20 mm from the face of reinforced concrete rubble. Full compensation for trimming reinforcement or metal shall be considered as included in the contract prices paid per cubic meter for the types of excavation shown in the Engineer's estimate, or the contract prices paid for furnishing and placing imported borrow or embankment material, as the case may be, and no additional compensation will be allowed therefor.

Settlement periods are required for the bridge approach embankments at the bridges listed in the following table.

At the bridge bents listed in the following table, excavation for the footings, drilling holes for cast-in-place piles, or driving the foundation piles at each location shall not be done until the expiration of the settlement period for the embankment at the adjacent abutment of the same structure or an adjacent structure.

Carmel Mountain Road
OC (Bridge No. 57-1125)

Abutment Number	Settlement Period, Days
1	30
4	30

At the locations and to the limits shown on the plans, material below the bottom of bridge footings shall be removed and replaced with Class 4 Concrete. Attention is directed to "Concrete Structures," of these special provisions for the requirements for Class 4 Concrete.

Prior to placing Class 4 Concrete or bar reinforcement, all abutment spread footing excavations shall remain available for inspection at for at least 4 working days.

If structure excavation or structure backfill involved in bridges is not otherwise designated by type, and payment for the structure excavation or structure backfill has not otherwise been provided for in the Standard Specifications or these special provisions, the structure excavation or structure backfill will be paid for at the contract price per cubic meter for structure excavation (bridge) of the types shown in the Engineer's Estimate or structure backfill (bridge) of the types shown in the Engineer's Estimate.

Stepped slope excavation shall be performed in accordance with the provisions in Section 19, "Earthwork", of the Standard Specifications and these special provisions.

Stepped slopes shall be constructed on all rippable cut slopes or as designated by the Engineer. The step height shall be 450 mm (± 100 mm). The step width shall be 450 mm (± 100 mm). The approximate midpoint of the horizontal tread shall be constructed on the staked slope line, so when completed the theoretical planned slope shall intersect the horizontal and vertical planes of the steps at their midpoints.

The top of the slope shall be rounded.

Where slopes transition from stepped slope to unstepped slope, or to a stepped slope of a different slope angle, the steps shall be blended by maintaining a constant vertical spacing and varying the tread width to achieve the transition.

The steps shall be constructed as shown on the plans, either parallel to the grade or level along the contour of the slope. The steps shall carry through the slope rounding at the ends of the excavation and blend into the ends of the slope rounding by varying the tread width.

Scaling shall not be performed on the stepped slopes except for the removal of material which cover more than one-half the shelf width.

When directed by the Engineer, the outer edge of the step shall be beveled during construction to reduce the sharp geometric lines on the slope and provide loose material to support growth.

Full compensation for construction of stepped slopes shall be considered as included in the contract price paid per cubic meter for roadway excavation and no additional compensation will be allowed therefor.

Slope sculpting shall be performed at the discretion of the Engineer on slopes containing large areas of exposed rock or slopes that require blasting. Sculpted slopes shall be constructed in conformance with the lines and grades established by the Engineer. When completed, the average plane of the slopes shall conform to the slopes indicated on the plans and no point on the completed slopes shall vary from the designated slopes by more than one meter, measured at right angles to the slope. In no case shall any portion of the slope encroach on the roadbed.

No loose rock or rock predisposed to detachment from the slope due to the influence of gravity, erosion, or transient hydrostatic (water filled cracks and joints) pressure shall be left on or above sculpted slopes.

Slope sculpting work will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

10-1.42 IRRIGATION CROSSOVERS

Irrigation crossovers shall conform to the provisions in Section 20-5, "Irrigation Systems," of the Standard Specifications and these special provisions.

Conduits to be placed in open trenches shall be in conformance with the provisions in Section 20-5.03B, "Conduit for Irrigation Crossovers," of the Standard Specifications.

Conduits to be installed under existing paving by jacking or drilling methods shall be in conformance with the provisions in Section 20-5.03B, "Conduit for Irrigation Crossovers," of the Standard Specifications.

Conduits to be placed in open trenches shall be corrugated high density polyethylene (CHDPE) pipe. Corrugated high density polyethylene pipe shall conform to the requirements in ASTM Designation: F 405 or F 667, or AASHTO Designation: M 252 or M 294 and shall be Type S. Couplings and fittings shall be as recommended by the pipe manufacturer.

Water line crossovers shall conform to the provisions in Section 20-5.03C, "Water Line Crossovers," of the Standard Specifications.

Sprinkler control crossovers shall conform to the provisions in Section 20-5.027D, "Sprinkler Control Crossovers," of the Standard Specifications.

Installation of pull boxes shall conform to the provisions in Section 20-5.027I, "Conductors, Electrical Conduit and Pull Boxes," of the Standard Specifications. When no conductors are installed in electrical conduits, pull boxes for irrigation crossovers shall be installed on a foundation of compacted soil.

At the Contractor's option conduits to be installed under existing paving may be installed by the directional bore method.

Conduits installed by directional bore method shall be polyvinyl chloride (PVC) plastic pipe, Schedule 40, and shall conform to Section 20-2.15B(1), "Plastic Pipe Supply Line," of the Standard Specifications.

The diameter of the boring tool for directional boring shall be only as large as necessary to install conduit. Mineral slurry or wetting solution shall only be used to lubricate the boring tool and to stabilize the soil surrounding the boring path. Mineral slurry or wetting solution shall be water based and environmentally safe.

Residue from directional bore operations shall be handled in the same manner specified for residue from saw cutting operations in "Existing Highway Facilities," of these special provisions.

The directional bore equipment shall have directional control of the boring tool and have an electronic boring tool location detection system. During operation, the directional bore equipment shall be able to determine the location of the tool both horizontally and vertically.

A representative of the Contractor must be in direct charge and control of the directional bore operation at all times.

The Engineer shall be notified 2 working days in advance of starting directional bore operations. Directional bore shall only be performed in the presence of the Engineer unless otherwise notified in writing by the Engineer.

Polyvinyl chloride (PVC) plastic pipe, Schedule 40 will be measured and paid for as 200 mm corrugated high density polyethylene pipe conduit.

10-1.495 IMPORTED TOPSOIL

Imported topsoil shall conform to the provisions in Section 20-2, "Materials," and Section 20-3, "Erosion Control," of the Standard Specifications and these special provisions.

Upon completion of the grading operations for the excavation and embankment slopes to receive imported topsoil, the topsoil shall be spread to a uniform depth of not less than 100 mm for excavation slopes and 300 mm for embankment slopes. The topsoil shall be compacted or stabilized in a manner that retains the material in place on the slopes. The topsoil shall not be compacted or stabilized to the degree that the topsoil is not maintained as a viable growing medium.

10-1.83 MISCELLANEOUS METAL (BRIDGE)

Miscellaneous metal (bridge) shall conform to the provisions for miscellaneous bridge metal in Section 75, "Miscellaneous Metal," of the Standard Specifications and these special provisions.

Miscellaneous metal (bridge) shall consist of the miscellaneous bridge metal items listed in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications, and the following:

- A. Bridge deck drainage system (including temporary deck drain covers).

Self-tapping screws used for sleeve connections shall be hex-head stainless steel, installed in holes drilled to fit the self-tapping screws, conforming to the requirements of ASTM Designation: A 276, Type 304.

Bridge deck drainage system will be measured by the kilogram as determined from scale weighings. The mass of non-metallic materials involved in constructing the bridge deck drainage system will not be included.

The steel plates for the temporary deck drain covers shall be furnished with a uniform surface texture that provides a coefficient of friction of not less than 0.35. Tapers of asphalt concrete shall be constructed around the sides of the temporary deck drains. Longitudinal tapers shall have a 100 to 1 slope, and transverse tapers shall have a 12 to 1 slope. Prior to opening the bridge to traffic, the temporary deck drain covers and asphalt tapers shall be removed and holes for anchorages shall be repaired.

The contract price paid per kilogram for bridge deck drainage system shall include full compensation for furnishing all labor materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and constructing bridge deck drainage systems, complete in place, including non-metallic materials, temporary deck drain covers with surface texture and tapers, and removal of temporary drain covers and tapers, as shown on the plans, as specified in the Standard Specifications and these special provision, and as directed by the Engineer.

If a portion of all of the bridge deck drainage system is fabricated more than 480 air line kilometers from both Sacramento and Los Angeles, additional shop inspection expenses will be sustained by the State. Whereas it is and will be impracticable and extremely difficult to ascertain and determine the actual increase in these expenses, it is agreed that payment to the Contractor for the miscellaneous metal items of work will be reduced \$5000 for each fabrication site located more than 480 air line kilometers from both Sacramento and Los Angeles and an additional \$3000 (\$8000 total) for each fabrication site located more than 4800 air line kilometers from both Sacramento and Los Angeles.

**ENGINEER'S ESTIMATE
11-080904**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	152394	RELOCATE SIGN STRUCTURE	EA	5		
42	152604	MODIFY INLET	EA	1		
43 (S)	153154	COLD PLANE ASPHALT CONCRETE PAVEMENT (60 MM MAXIMUM)	M2	1800		
44	153214	REMOVE CONCRETE CURB	M	500		
45	153221	REMOVE CONCRETE BARRIER	M	1000		
46	153229	REMOVE CONCRETE BARRIER (TYPE K)	M	4010		
47	153531	ACCESS OPENING, SOFFIT	EA	6		
48	155003	CAP INLET	EA	19		
49	155006	CAP RISER	EA	19		
50	156576	REMOVE METAL RAILING	M	100		
51	049467	REMOVE TIEBACK WALL	LS	LUMP SUM	LUMP SUM	
52	150844	REMOVE SLOPE PAVING	LS	LUMP SUM	LUMP SUM	
53	157551	BRIDGE REMOVAL, LOCATION A	LS	LUMP SUM	LUMP SUM	
54	157552	BRIDGE REMOVAL, LOCATION B	LS	LUMP SUM	LUMP SUM	
55	157563	BRIDGE REMOVAL (PORTION), LOCATION C	LS	LUMP SUM	LUMP SUM	
56	160101	CLEARING AND GRUBBING	LS	LUMP SUM	LUMP SUM	
57	160120	REMOVE TREE	EA	460		
58	170101	DEVELOP WATER SUPPLY	LS	LUMP SUM	LUMP SUM	
59	190101	ROADWAY EXCAVATION	M3	300 000		
60	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	

**ENGINEER'S ESTIMATE
11-080904**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
161	650084	1200 MM REINFORCED CONCRETE PIPE	M	15		
162	031672	100 MM PLASTIC PIPE UNDERDRAIN (MOD)	M	220		
163	031673	200 MM PLASTIC PIPE UNDERDRAIN	M	6		
164	681066	150 MM PLASTIC PIPE	M	45		
165	690167	450 MM CORRUGATED STEEL PIPE DOWNDRAIN (2.77 MM THICK)	M	120		
166	690172	600 MM CORRUGATED STEEL PIPE DOWNDRAIN (3.51 MM THICK)	M	35		
167	698162	450 MM ALTERNATIVE PIPE DOWNDRAIN	M	10		
168	703233	GRATED LINE DRAIN	M	410		
169	703271	450 MM CORRUGATED STEEL PIPE RISER (2.01 MM THICK)	M	1		
170	703450	WELDED STEEL PIPE CASING (BRIDGE)	M	114		
171	705337	600 MM ALTERNATIVE FLARED END SECTION	EA	2		
172	705338	750 MM ALTERNATIVE FLARED END SECTION	EA	1		
173	705340	1050 MM ALTERNATIVE FLARED END SECTION	EA	1		
174	706500	DEBRIS RACK	EA	1		
175	031674	1500 MM PRECAST CONCRETE RISER	M	5		
176	708064	450 MM ALTERNATIVE PIPE RISER	M	20		
177	708066	600 MM ALTERNATIVE PIPE RISER	M	10		
178	721008	ROCK SLOPE PROTECTION (LIGHT, METHOD B)	M3	100		
179	721009	ROCK SLOPE PROTECTION (FACING, METHOD B)	M3	15		
180	721010	ROCK SLOPE PROTECTION (BACKING NO. 1, METHOD B)	M3	20		

**ENGINEER'S ESTIMATE
11-080904**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181	721011	ROCK SLOPE PROTECTION (BACKING NO. 2, METHOD B)	M3	100		
182	721022	ROCK SLOPE PROTECTION (1T, METHOD B)	M3	130		
183	721023	ROCK SLOPE PROTECTION (1/2T, METHOD B)	M3	40		
184	721431	CONCRETE (CONCRETE APRON)	M3	15		
185	727901	MINOR CONCRETE (DITCH LINING)	M3	190		
186	031675	MINOR CONCRETE (DITCH LINING - COLORED)	M3	25		
187	729010	ROCK SLOPE PROTECTION FABRIC	M2	220		
188	731510	MINOR CONCRETE (CURB, GUTTER, SIDEWALK AND DRIVEWAY)	M3	280		
189	031676	MINOR CONCRETE (TEXTURED PAVING) (GORE PAVING)	M2	5270		
190	731530	MINOR CONCRETE (TEXTURED PAVING)	M2	900		
191 (S-F)	750001	MISCELLANEOUS IRON AND STEEL	KG	17 364		
192 (S-F)	750505	BRIDGE DECK DRAINAGE SYSTEM	KG	4300		
193 (S)	800391	CHAIN LINK FENCE (TYPE CL-1.8)	M	170		
194 (S)	802589	1.5 M CHAIN LINK GATE (TYPE CL-1.8)	EA	16		
195 (S)	802672	4.9 M CHAIN LINK GATE (TYPE CL-1.8)	EA	2		
196 (S)	031677	LOCKABLE CONTROL GATE	EA	2		
197	820107	DELINEATOR (CLASS 1)	EA	225		
198 (S)	820110	MILEPOST MARKER	EA	12		
199	820118	GUARD RAILING DELINEATOR	EA	225		
200 (S)	832001	METAL BEAM GUARD RAILING	M	40		

**ENGINEER'S ESTIMATE
11-080904**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
241 (S)	860402	LIGHTING (CITY STREET)	LS	LUMP SUM	LUMP SUM	
242 (S)	860460	LIGHTING AND SIGN ILLUMINATION	LS	LUMP SUM	LUMP SUM	
243 (S-F)	860761	LIGHTING CONDUIT (BRIDGE)	M	2450		
244 (S-F)	860792	COMMUNICATION CONDUIT (BRIDGE)	M	1729		
245 (S-F)	860796	SPRINKLER CONTROL CONDUIT (BRIDGE)	M	1949		
246 (S)	860931	TRAFFIC MONITORING STATION (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
247 (S)	860932	TRAFFIC MONITORING STATION (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
248 (S)	860933	TRAFFIC MONITORING STATION (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
249 (S)	031682	FIBER OPTIC COMMUNICATION SYSTEM	LS	LUMP SUM	LUMP SUM	
250 (S)	861101	RAMP METERING SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
251 (S)	861102	RAMP METERING SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
252 (S)	861103	RAMP METERING SYSTEM (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
253 (S)	861104	RAMP METERING SYSTEM (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
254 (S)	861105	RAMP METERING SYSTEM (LOCATION 5)	LS	LUMP SUM	LUMP SUM	
255	BLANK					
256	200101	IMPORTED TOPSOIL	M3	14 600		
256	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID: _____