

**DEPARTMENT OF TRANSPORTATION**

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



**\*\* WARNING \*\* WARNING \*\* WARNING \*\* WARNING \*\***  
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August 30, 2002

04-SCI-87-10.0/14.4  
04-4874R4  
ACNH-S087(023)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for Building Construction in SANTA CLARA COUNTY IN SAN JOSE FROM JULIAN STREET TO ROUTE 101.

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 10, 2002.

This addendum is being issued to revise the Project Plans, Notice to Contractors and Special Provisions, the Proposal and Contract, and the Federal Minimum Wages with Modification Number 15 dated 8-23-02. 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](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

Project Plan Sheets 94, 219, 306, 307, 309 and 312 are revised. Half-sized copies of the revised sheet is attached for substitution for the like-numbered sheets.

In the Special Provisions, the "IMPORTANT SPECIAL NOTICES" is revised as attached.

In the Special Provisions, the "A+B BIDDING SPECIAL NOTICE" is revised as attached.

In the Special Provisions, "NOTICE TO CONTRACTORS," the eleventh paragraph is revised as follows:

"Cross sections for this project are available at the Department of Transportation, Duty Senior's Desk, 111 Grand Ave, Oakland, CA 94623, (510) 286-5209."

In the Special Provisions, "NOTICE TO CONTRACTORS," "BIDDER INQUIRIES" is added after the eighth paragraph as attached.

In the Special Provisions, Section 5-1.17 "SOUND CONTROL REQUIREMENTS," the second paragraph is revised as follows:

"The noise level from the Contractor's operations, between the hours of 7:00 p.m. and 7:00 a.m., shall not exceed 86 dbA at a distance of 15 m. This requirement shall not relieve the Contractor from responsibility for complying with local ordinances regulating noise level. Except as otherwise noted, pile driving and earthwork compaction operations shall not be performed between 7:00 p.m. and 7:00 a.m. Monday through Saturday. For Hedding Street UC, pile driving operations shall be limited to the hours indicated elsewhere in the special provisions."

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In the Special Provisions, Section 5-1.20 "ARCHAEOLOGICALLY SENSITIVE AREAS," subsection "MIGRATORY NESTING BIRDS," the first paragraph is revised as follows:

"There may be nesting cliff swallows in the project vicinity. The nesting season for cliff swallows is between February 15<sup>th</sup> and September 1<sup>st</sup>. All construction activities on or around structures shall be performed in accordance with these special provisions."

In the Special Provisions, Section 5-1.20 "ARCHAEOLOGICALLY SENSITIVE AREAS," the "VIBRATION MONITORING," is deleted.

In the Special Provisions, Section 10-1.01 "ORDER OF WORK," subsection "DESIGNATED PORTION OF THE WORK," the fifth paragraph is revised as follows:

"Hedding Street may be closed to vehicular traffic as shown on the plans for a maximum of six (6) months from the date of its actual closure. Pedestrian traffic shall be maintained at all times. The Hedding Street closure is allowed to construct the Hedding Street Undercrossing. The City of San Jose Department of Transportation shall be notified of this closure 15 days in advance of the closure."

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

"The Contractor shall comply with regulations and local ordinances of the City of San Jose. Regulations and local ordinances for the City of San Jose will be available to the prospective bidders at:

City Clerk's Office  
City of San Jose  
801 North First Street  
San Jose, CA 95110  
Phone (408) 277-4424."

In the Special Provisions, Section 10-1.011 "PHOTO SURVEY OF EXISTING FACILITIES," is added as attached.

In the Special Provisions, Section 10-1.012 "STORM DRAIN AND SANITARY SEWER VIDEO SURVEY," is added as attached.

In the Special Provisions, Section 10-1.013 "VIBRATION MONITORING," is added as attached.

In the Special Provisions, Section 10-1.16 "OBSTRUCTIONS," the fourth paragraph is revised as follows:

"It is anticipated that the following utility facilities will be relocated prior to the dates shown:

Utility	Location	Date
21 kv PG&E	Hedding St. from "H" sta. 0+80 to 1+60	12/01/02"

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In the Special Provisions, Section 10-1.20 "MAINTAINING TRAFFIC," the eighth paragraph is revised as follows:

"The Contractor shall notify local authorities of the Contractor's intent to begin work at least 5 days before work is begun. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make arrangements relative to keeping the working area clear of parked vehicles. Work performed within 37m of an existing signalized intersection in City of San Jose Right of Way shall require police officers for traffic control."

In the Special Provisions, Section 10-1.27 "EXISTING HIGHWAY FACILITIES," subsection "RECONSTRUCT SLIDE HEADGATE AND RISER ASSEMBLY," the following is added after the first paragraph:

"Salvaged crank operated slide headgate and riser assembly shall be retrieved from the City of San Jose Yard located at 1404 Mabury Road, San Jose. The Contractor shall notify the City of San Jose Yard Coordinator at (408) 277-5411 a minimum 5 days prior to retrieving the salvaged materials."

In the Special Provisions, Section 10-1.30 "EARTHWORK," the "'G" Line" table, is revised as follows:

"'G" Line		
Stations	Surcharge Height, Meters	Settlement Period, Calendar Days
149+00 to 150+40	Up to 3.6 m	From November, 1, 2001. 360 days or until desired amount of settlement occurs as measured by field monitoring devices
150+80 to 154+85	Up to 3.6 m	From November 1, 2001. 360 days or until desired amount of settlement occurs as measured by field monitoring devices
156+20 to 160+00	Up to 3.6 m	From June 30, 2002. 360 days or until desired amount of settlement occurs as measured by field monitoring devices"

In the Special Provisions, Section 10-1.70 "REINFORCED CONCRETE PIPE (CITY OF SAN JOSE)," the third paragraph is revised as follows:

"Trench excavation, bedding, and backfill shall conform to Section 1301, "Trench Excavation, Bedding and Backfill," of the City of San Jose's Standard Specifications and these special provisions. Bedding for all reinforced concrete pipe (City of San Jose) shall be Type A with Class I material."

In the Special Provisions, Section 10-1.79 "PUMPING PLANT ELECTRICAL EQUIPMENT," subsection "TRAINING," the first paragraph is revised as follows:

"Training of personnel in programming, connection, operation, trouble shooting, and maintenance of the pump controller shall be provided. The training shall be conducted for not more than 6 persons as designated by the Engineer at the job site or at a site mutually agreed upon by the Contractor and the Engineer for a minimum of 4 hours. The trainer shall be an authorized representative of the pump controller manufacturer."

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In the Special Provisions, Section 10-1.84 "CHAIN LINK FENCE AND GATES," the second paragraph is revised as follows:

"Vinyl coated chain link fence shall be black polyvinyl chloride bonded steel chain link fabric and fittings. Chain link fabric shall be 9 gauge, 44mm mesh over a zinc substrate. Polyvinyl chloride shall be applied by the thermal extrusion process. Posts and rails shall be hot dipped galvanized with 2 coats of black metal paint applied over a metal primer."

In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "MAINTAINING EXISTING CITY TRAFFIC SIGNAL AND STREET LIGHTING SYSTEMS," the first paragraph is revised as follows:

"The Contractor shall notify the Engineer and the Department of Transportation of the City of San Jose, Phone (408) 277-5515, at least five days prior to performing any work on their existing street lighting system. All splicing of new to existing conductors or disconnection of existing conductors shall be done in the presence of the Engineer, the City Engineer and as directed."

In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS," the second paragraph is revised as follows:

"The Contractor shall give a 24 hours notice to Electrical Maintenance Supervisor at (408) 277-5515 of the City of San Jose Department of Transportation and the Engineer before beginning any work on the existing City traffic signals and City lighting system, including any work which may take vehicle detectors or pedestrian push-buttons out of service, or may reroute traffic off of existing vehicle detectors, so that signals can be changed to fixed time operations and lighting systems can be turned off."

In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "OCTAFLUTED LIGHTING STANDARDS," the third paragraph is revised as follows:

"Octafluted lighting standards shall have a uniform 0.63 mm taper over the length of the 10 m shaft. The shaft shall be straight with a permissive variation not to exceed one 25.4 mm as measured at the midpoint of the shaft.

In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "OCTAFLUTED LIGHTING STANDARDS," the tenth paragraph is revised as follows:

"Type E mast arms for octafluted lighting standards shall be as depicted in the plans. Transformer base pedestals for type 10A octafluted standards shall conform to the dimensions and design as indicated in the Standard Plan Details. The top and bottom plates of the transformer base pedestals shall be fabricated from 20mm steel plate and the sides from 7 gauge hot-rolled steel. After fabrication, exposed welds shall be ground smooth. Transformer base pedestals shall have a trapezoidal access door a minimum of 215mm wide at the top, 250mm wide at the bottom and high. The door shall be provided with tamper resistant locking hardware. To facilitate plumbing, leveling and positioning of the transformer base pedestal, two 13mm steel anchor clip plates of the design depicted in the plans shall be provided for each anchor bolt."

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In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "PAINTING," the first paragraph is revised as follows:

"All service and controller cabinets and Ornamental Lighting Standards at Location 1 shall be painted."

In the Special Provisions, Section 10-3.48 "CITY OF SAN JOSE ELECTRICAL SPECIAL PROVISIONS," subsection "SIGNAL STANDARDS," the "Ornamental luminaires," is added to the end of the subsection as attached.

In the Special Provisions, Section 39-1.01 "DESCRIPTION," the following is added after the last paragraph:

"Asphalt Concrete for temporary tapers shall be commercial quality and shall conform to the provisions in Section 39, 'Asphalt Concrete', of the Standard Specifications and these special provisions."

In the Special Provisions, Section 39-8.02 "PRIME COAT AND PAINT BINDER (TACK COAT)" the sixth paragraph is revised as follows:

"Paint binder (tack coat) shall be Rapid-Setting Asphaltic Emulsion spread at a rate of 0.45-0.54 L/m<sup>2</sup> of surface covered. The exact rate of application will be determined by the Engineer."

In the Proposal and Contract, the Engineer's Estimate Item 90 is revised as attached.

To Proposal and Contract book holders:

Replace page 7 of the Engineer's Estimate in the Proposal with the attached revised page 7 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.

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

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**IMPORTANT  
SPECIAL NOTICES**

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- The bidder's attention is directed to Section 5, containing specifications for "Dispute Review Board," of the Special Provisions, regarding establishing a Dispute Review Board (DRB) for the project.
- The Special Provisions for Federal-aid projects (with and without DBE goals) have been revised to incorporate changes made by new regulations governing the DBE Program (49 CFR Part 26).

Sections 2 and 5 incorporate the changes. Bidders should read these sections to become familiar with them. Attention is directed to the following significant changes:

Section 2, "Disadvantaged Business Enterprise (DBE)" revises the counting of participation by DBE primes, and the counting of trucking performed by DBE firms. The section also revises the information that must be submitted to the Department in order to receive credit for trucking.

Section 2, "Submission of DBE Information" revises the information required to be submitted to the Department to receive credit toward the DBE goal. It also revises the criteria to demonstrate good faith efforts.

Section 5, "Subcontractor and DBE Records" revises the information required to be reported at the end of the project, and information related to trucking that must be submitted throughout the project.

Section 5, "DBE Certification Status" adds new reporting requirements related to DBE certification.

Section 5, "Subcontracting" describes the efforts that must be made in the event a DBE subcontractor is terminated or fails to complete its work for any reason.

Section 5, "Prompt Progress Payment to Subcontractors" requires prompt payment to all subcontractors.

Section 5, "Prompt Payment of Withheld Funds to Subcontractors" requires the prompt payment of retention to all subcontractors.

- **Payment Bonds**  
Attention is directed to Section 5 of the Special Provisions, regarding contract bonds. The payment bond shall be in a sum not less than one hundred percent of the total amount payable by the terms of the contract.
- Federal minimum wage rates for this project are no longer included in the "Proposal and Contract" book. They will be available through the California Department of Transportation's Electronic Project Document Distribution Internet Web Site at <http://hqidoc1.dot.ca.gov/>. See Notice to Contractors.
- Attention is directed to Section 1, "Specifications and Plans," of these special provisions for Amendments To July 1999 Standard Specifications. Amendments to the various sections of the Standard Specification have been consolidated into Section 1 and dated to reflect the most recent revision.

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**A + B BIDDING  
SPECIAL NOTICE**  
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The bidder's attention is directed to Section 2, "Proposal Requirements and Conditions," Section 3-1.01B, "Award and Execution of Contract," and Section 4, "Beginning of Work, Time of Completion and Liquidated Damages," in the special provisions. In addition to the item prices and totals, the proposal shall set forth the number of working days bid to completely open the roadway to public traffic. Working days are defined in said Section 4. All bids will be compared on the basis of the sum of the Engineer's Estimate of the quantities of work to be done plus the product of the number of working days bid to completely open the roadway to public traffic and the cost per day shown on the proposal form. The lowest bid will be determined on the basis of the "Total Basis for Comparison of Bids" set forth in the proposal.

**Bids in which the number of working days bid to complete all work exceed 550 will be considered non-responsive and will be rejected.**

The bidder's attention is also directed to the provisions in said Section 4 of the special provisions regarding liquidated damages.

**No incentive payments will be paid nor will disincentive deductions be charged on this project.**

For purposes of determining liquidated damages, the work must be completed and the contract accepted by the Director, as specified in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications.

Examples of determining liquidated damages are as follows:

Completing all the work, at 11:55 p.m. on day 550 shall be deemed completing all the work shown on the project plans on day 550.

Completing all the work, at 12:05 a.m. on day 551 shall be deemed completing all the work shown on the project plans on day 551.

The Department will consider bidder inquiries only when a completed "Bidder Inquiry" form is submitted. A copy of the "Bidder Inquiry" form is available at the Internet address shown below. The bidder inquiry shall include the bidder's name and telephone number. Submit "Bidder Inquiry" forms to:

Construction Program Duty Senior  
111 Grand Avenue  
Oakland, CA 94612

Fax Number: (510) 622-1805  
E-mail: DUTY\_SENIOR\_DISTRICT04@dot.ca.gov  
Tel. Number: (510) 286-5209

To expedite processing, submittal of "Bidder Inquiry" forms via Fax or E-mail is preferred.

To the extent feasible and at the discretion of the Department, completed "Bidder Inquiry" forms submitted for consideration will be investigated, and responses will be posted on the Internet at:

[http://www.dot.ca.gov/hq/esc/oe/project\\_status/bid\\_inq.html](http://www.dot.ca.gov/hq/esc/oe/project_status/bid_inq.html)

The responses to bidders' inquiries, unless incorporated into formal addenda to the contract, are not a part of the contract, and are provided for the bidder's convenience only. In some instances, the question and answer may represent a summary of the Matters discussed rather than a word-for-word recitation. The availability or use of information provided in the responses to Bidders' inquiries is not to be construed in any way as a waiver of the provisions of Section 2-1.03 of the Standard Specifications or any other provision of the contract, the plans, Standard Specifications or Special Provisions, nor to excuse the contractor from full compliance with those contract requirements. Bidders are cautioned that subsequent responses or contract addenda may affect or vary a response previously given.

#### **10-1.011 PHOTO SURVEY OF EXISTING FACILITIES**

This work shall consist of performing a photo survey of the existing buildings which could be damaged by the Contractor's operations. The Contractor shall perform the photo survey prior to any construction activities. Photo survey shall be conducted in conformance with the requirements in these special provisions and as directed by the Engineer. The scope of the examination will include observation of cracks in structures, settlement, leakage and the like. Crack monitoring shall be done on all existing building cracks with initial crack-gage installation as part of the photo survey project.

The photo survey shall be conducted at the following facilities:

1. Probation Building and Juvenile Center at 840 Guadalupe Parkway, San Jose, CA
2. California National Guard Armory Building at 251 W. Hedding Street, San Jose, CA

The Contractor shall submit to the Engineer for approval a complete description of the work to be completed for each surveyed location. The photo survey to be completed shall consist of records of observations and photographs.

Records in triplicate of all observations shall be prepared by the Contractor and every document shall be signed by the authorized representatives of the State and of the Contractor. Photographs, as deemed advisable by the Engineer will be made by the Contractor and signed in the manner specified above. One signed copy of every document and photograph will be kept on file by the Engineer.

The above referenced records and photographs are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations. The above-referenced records and photographs are for the protection of the adjacent property owners, the Contractor, and the State. These records will be used to determine any damage from the Contractor's operations during the work.

The contract lump sum price paid for photo survey of existing facilities shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in the photo survey of the existing facilities, as specified in these special provisions, and as directed by the Engineer.

### **10-1.012 STORM DRAIN AND SANITARY SEWER VIDEO SURVEY**

This work shall consist of videotaping existing storm, sanitary or other pipelines to document condition. Videotaping shall be done prior to the start of any construction activity within 20 m of an existing pipeline and again following completion of all construction activity in said area.

Two copies of each pre-construction videotape shall be provided to the Engineer at least three days prior to the start of construction activity.

Two copies of each post-construction videotape shall be provided to the Engineer no later than ten days following completion of all construction activity in the referenced area.

Full compensation for videotaping existing pipelines, including providing copies of all videotapes, shall be considered as included in the contract prices paid for the various items of work and no separate payment will be made therefor.

This work shall consist of investigating, storm drain and sanitary sewer cleaning as necessary to facilitate survey, documenting, and reporting on the structural condition of the existing City of San Jose 1050 mm storm drain at Sta. "G" 152+95, 1350 mm sanitary sewer at Sta. "G" 153+60, and 533 mm sanitary sewer at Sta. "G" 154+60 as indicated on the plans.

Video survey for the 1050 mm storm drain shall be for the existing drainage system at G Sta 152+95 shown on the plans.

Video survey for the sanitary sewer shall be between the manholes within the project.

The Contractor shall videotape with narration the condition of the sewer to show any and all structural deficiencies including cracks, holes, exposed aggregates and reinforcing bars, honey combed areas, damaged construction joints, deteriorated concrete surfaces, infiltration's, root intrusions and missing pieces. The locations of all deficiencies shall be shown by stationing with references points agreed upon by the Engineer. The Contractor shall provide the dimensions of all major structural deficiencies and provide supplemental photographs of such deficiencies when requested by the Engineer.

At least 10 working days prior to investigation, the Contractor shall submit for acceptance 5 copies of the proposed operations and safety procedure to the Engineer.

The Engineer will either accept or reject such procedures within 5 working days of their receipt. The procedures shall comply with the following safety provisions.

**SAFETY PROCEDURES**—Except to the extent that more explicit or more stringent requirements are stated herein, the Contractor shall comply with all applicable federal, State and local safety and health requirements and standards.

Pre-entry and Confined Space Operations – Pre-entry and confined space operations shall be performed in accordance with the provisions of Article 108 of the General Industry Safety Orders and Section 1532 of the Construction Safety Orders of Title 8 of the California Code of Regulations. These provisions shall govern:

1. blocking of laterals;
2. testing for existing of dangerous water and air contamination;
3. ventilation requirements;
4. entry rate work within confined spaces;
5. precautions for emergencies involving work in the sewer;
6. other related work.

Testing shall take place for the following suspected conditions prior to entering the sewer, and at all times during inspection:

1. oxygen deficiencies
2. carbon dioxide
3. combustible gases
4. contaminated and infectious waste.

The Contractor shall provide safeguards, including traffic barriers, warning signs, barricades, temporary fences and other similar safeguards that are required for the protection of all personnel during the performance of the operations.

The Contractor shall provide to all workers and inspectors, protective, disposable clothing for sewage conditions consisting of full-body coveralls, gloves, boot type covers on reusable foot wear, eye protection, hardhats and safety tools as required by job conditions and CAL-OSHA.

The Contractor shall provide a plan for rescue of workers and investigators for review and approval by the Engineer.

**EQUIPMENT FOR TELEVISIONING.**—Closed Circuit Television Camera (CCTV) shall have a rotating lens camera with articulating head. Each joint shall be scanned 360 degrees. The CCTV shall be specifically designed and constructed for sewer inspection. The CCTV shall be operative in one hundred percent (100%) humidity conditions. Lighting for the CCTV shall minimize relative glare. Lighting and CCTV quality shall be suitable to provide a clear, in focus picture of the entire periphery of the water pipe for all conditions encountered during the work. Focal distance shall be adjustable through a range from 150 mm to infinity. The remote reading meter counter shall be accurate to one percent (1%) over the length of the particular section being inspected. The CCTV, television monitor and other components of the color video system shall be capable of producing a minimum of 350 line resolution.

**TELEVISIONING PROCEDURES.**-- The Contractor shall examine the storm drain and sanitary sewer to insure the passage of the camera through all the drain and sewer prior to any televising.

The camera operator shall slow or stop the camera at potential or actual imperfections in the sewer to obtain a high quality video image.

**DOCUMENTATION OF TELEVISIONING.**-- The Contractor shall prepare for the Engineer's approval a written report documenting the results of its investigation. In this report, the Contractor shall place its emphasis on first, the deficiencies discovered during this investigation, secondly the proposed measures to remedy deficiencies and thirdly the serviceability of the present sewer.

Two copies of the recorded video tape and two copies of the written report shall be delivered to the Engineer not later than 5 working days after completion of the investigation. The Engineer will review the recorded tape and written report and notify the Contractor if the recording and the written report are satisfactory.

The video tape(s) shall include the following:

Video:

Report No.

Date of TV inspection.

Upstream and downstream access hole or station numbers.

Current distance along reach (tape counter meter)

Printed labels on tape container and tape cartridge with location information, date, format, and other descriptive information.

Audio:

Date of TV inspection.

Confirmation of upstream and downstream access hole or station numbers

Description of pipe size, type and pipe joint length.

Description and location of each defect.

Description and location of each service connection.

Written:

Date of TV inspection.

Tape number.

Location, size, type, and length of pipe.

Direction of flow and measurement ("From" manhole/station number "To" manhole/station number).

Tape counter numbers (beginning and end).

Sketch showing the street and cross streets where the TV inspection was made.

Description and location of each defect.

Description and location of each service connection.

**MEASUREMENT AND PAYMENT.**—Storm drain, sanitary sewer, 1675 MM water line video taping will be measured by the unit for each actual investigation and video survey of the entire length of the drain and sewer. Rejected inspection due poor taping will not be measured and paid. The contract unit price paid for storm drain, sanitary sewer, 1675 MM water line video taping shall include full compensation for furnishing all labor, materials, tools, equipment, storm drain and sanitary sewer cleaning as necessary to facilitate the video survey, and incidentals, and for doing all the work involved in conducting the storm drain and sanitary sewer video survey, including providing plans, reports and video tapes, safety devices and precautions, as specified in these special provisions, and as directed by the Engineer.

### **10-1.013 VIBRATION MONITORING**

This work shall consist of vibration monitoring as a means of protecting properties from excess vibration from construction activities.

Vibration monitoring shall be performed at locations and on days as determined by the Engineer. Vibration measurements and recording shall be conducted before and during pile driving, hauling of dirt, placing of base material, compaction, and during paving operations or other significant activity when that activity occurs within 25 meters of any building as determined by the Engineer. Vibration measurements shall be conducted for at least two hours at each location during a typical measurement day.

The baseline vibration monitoring at each site shall be conducted prior to the start of construction activities or when there is a break in the construction activities.

Vibration monitoring instrument shall be furnished and installed by the Contractor and shall be capable of continuous operation with instant monitoring results. The vibration monitoring system shall be capable of measuring peak particle velocity and frequency levels as low as 2.5 mm/sec using a 3-axis geophone. The vibration monitoring system shall undergo certified laboratory calibration conformance at least once a year. At the time of measurement the vibration monitoring system shall have a certificate that is not expired.

The Contractor shall have the instrument in place and functioning properly prior to any construction activities within 25 meters of the affected property. The vibration monitoring instrument shall be set up in a manner such that an immediate warning is given when particle velocity equal to or exceeding 5 mm per second is produced. Immediately after the warning is given by the instrument, the contractor shall inform the Engineer in writing. Monitoring instrument shall be stationed within 1 meter of the exterior of designated building on the side facing the Contractor's work site. When any reading on monitoring instrument equals or exceed 5 mm per second, work shall immediately cease and the Contractor shall immediately take whatever action is necessary to reduce and maintain the monitoring instrument reading below a particle velocity of 5 mm per second.

The results of the measurements shall be tabulated. A report shall be prepared to tabulate the measured vibration levels at three axes and associated frequencies. The report shall also include information such as measurement location, date, and source of vibration. The highest measured vibration levels for each axis and their relationship to the criteria shall also be included in the report. The report as specified above shall be provided to the Engineer on paper and on floppy disk or recordable compact disk. The Contractor shall submit the report no later than 5 working days after each monitoring.

All measurement results and reports shall become the property of Caltrans. The Contractor shall not provide the measurement results, verbally or written, or reports to others unless approved in writing by the Engineer.

A technician under the supervision of the qualified person may conduct the actual measurements. Compliance with this section does not relieve the Contractor of full responsibility for damage caused by Contractor's operations as per Section 7-1.12 "Responsibility for Damage," of the Standard Specifications.

Vibration monitoring will be measured and paid by the unit. Each unit shall consist of an 8-hour day vibration monitoring at one to three locations.

The contract unit price paid for vibration monitoring shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all work involved in vibration monitoring, as specified in these special provisions and as directed by the Engineer.

**Ornamental luminaires.**--Ornamental luminaires shall be styled to replicate the Acorn luminaire and conform to the details shown on the plans and these special provisions.

The luminaire shall be a post mounted 55 W low pressure sodium lamp fixture. Luminaires shall be manufactured by Unique Solutions, Hadco, Ameron or equal.

The Contractor shall submit to the Engineer manufacturer's technical data sheets, catalogue cuts, and evidence (certificate or letter) indicating that all ornamental poles to be furnished are acceptable to the City of San Jose.

Each luminaire shall consist of a housing, an integral ballast assembly, and the optical assembly.

The optical assembly shall be molded thermal resistant borosilicate glass or polycarbonate reflector and refractor. The upper portion of the system shall incorporate a series of reflecting prisms that redirect over 50% of the upward light into the controlling refractor while allowing a soft upright component to define the traditional acorn shape. The lower position shall use precisely molded refracting prisms to control the distribution of light to maximize utilization, uniformity, and luminaire spacing. The very top of the assembly may be a removable spring loaded prismatic glass or polycarbonate cover with decorative finial for toolless entry into the lamp chamber. The luminaire shall come with a solid finial with a gold finish, 4 gold medallions and a decorative band with a gold finish as shown on the plans. The minimum coefficient of utilization shall be 0.320 for 55 W at five mounting heights in a direction toward the street side. The minimum footcandle shall be 0.009 for 55 W at five mounting heights in a direction perpendicular to the street side aiming direction. Asymmetric refractor for IES Type III distribution shall be used.

The luminaire housing shall be a decorative leaf style cast aluminum assembly and provides an enclosure for the plug-in electrical module including the ballast. The nickel plated lamp grip socket and the three station incoming line terminal block shall be prewired to a five conductor receptacle for ease in connecting the lamp ballast. A slipfitter shall mount onto a 76.2 mm high by 73 mm to 79 mm O.D. pipe tenon.

The decorative leaf style cast iron luminaire housing door shall contain the ballast components and is held in place by two captive Y4-20 stainless steel screws. A matching six conductor keyed connector shall connect to the receptacle mounted in the luminaire housing to complete the wiring. The door shall have a means to support itself on the luminaire which allows both hands to be free while making or breaking connections. Wiring shall not be directly exposed to light from the lamp or from the sun through the refractor, and shall be routed together through housing and lamp assembly socket support.

Low pressure sodium lamps shall conform to the following:

The lamps shall conform to the applicable ANSI Standard for Lamp Designation L-74-RF-135.

Low pressure sodium lamps shall have a minimum of 93 percent maintenance of initial lumens during rated life and shall comply with the following minimum performance requirements:

Lamp Designation ANSI Code: L-74-RF-135  
Nominal Watts: 55  
Initial Lumens: 8000  
Rated Average Life (@ 10 Hrs/Start) : 18,000 hrs  
Operating Position: Horizontal  $\pm 20^\circ$

Ballasts for ornamental luminaires shall be the autotransformer or high reactance type. Ballast shall be the multi-tap types for different voltage ranges. Ballast shall be the integral part of the luminaire and held securely in place with devices that allow easy and safe removal and replacement in the field without the necessity of removing the luminaire from the bracket arm.

When operated with the lamp, the ballast shall have the following characteristics and maintain the following lamp operation:

1. The power factor shall be not less than 90 percent when the ballast is operated at nominal line voltage.

Lamp wattage regulation spread, at any lamp voltage from nominal through life, shall not vary by more than  $\pm 6$  percent for  $\pm 10$  percent input voltage variation.

The lamp current crest factor shall not exceed 1.8 at nominal line voltage.

The luminaire housing shall be finished with a fused coating of electrostatically applied polyester powder paint after a seven stage pretreatment process. Color shall be dark green conforming to Color No. 24108 of Federal Standard 595B. All castings shall utilize alloy #356 copper free aluminum and all hardware shall be stainless steel.

**ENGINEER'S ESTIMATE  
04-4874R4**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81	029536	GEOMEMBRANE (GASOLINE RESISTANT)	M2	1560		
82	029537	GEOTEXTILE CUSHION	M2	280		
83 (S)	029538	EROSION CONTROL NETTING	M2	400		
84 (S)	203003	STRAW (EROSION CONTROL)	TONN	14		
85 (S)	203014	FIBER (EROSION CONTROL)	KG	1870		
86	203021	FIBER ROLLS	M	1860		
87	029539	DRAIN INLET PROTECTION	EA	6		
88	029540	CONCRETE DRAINAGE APRON	EA	7		
89 (S)	203024	COMPOST (EROSION CONTROL)	KG	5470		
90	203026	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	3		
91 (S)	203045	PURE LIVE SEED (EROSION CONTROL)	KG	180		
92 (S)	203061	STABILIZING EMULSION (EROSION CONTROL)	KG	410		
93 (S)	029541	MULCH (EROSION CONTROL)	M3	150		
94	208038	NPS 3 SUPPLY LINE (BRIDGE)	M	208		
95	208288	50 MM PLASTIC PIPE (PR 315) (SUPPLY LINE)	M	300		
96	029542	75 MM WATER METER	EA	2		
97	029543	65 MM WATER METER	EA	1		
98	208501	40 MM PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)	M	140		
99	208502	50 MM PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)	M	350		
100	208723	100 MM ALTERNATIVE CONDUIT	M	28		