RESOLUTION No. 17-120

OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NEVADA

RESOLUTION APPROVING CONSTRUCTION DOCUMENTS AND AUTHORIZING THE PURCHASING AGENT TO SOLICIT BIDS FOR PHASE 2 OF A NEW PERIMETER FENCE AND GATE SYSTEM AT THE NEVADA COUNTY AIRPORT

WHEREAS, the Nevada County Airport desires to build a new perimeter fence and gate system; and

WHEREAS, the Airport's engineering consultant has completed the design and engineering of the perimeter fence and gate system; and

WHEREAS, Resolution 16-574 awarded a contract in December of 2016 for construction of Phase 1 of the new perimeter fence and gate system with construction of Phase 1 commencing in the spring of 2017; and

WHEREAS, federal and state grant funds are expected to be available to commence construction of Phase 2 once a winning bid is selected.

NOW, THEREFORE, BE IT RESOLVED that the Nevada County Board of Supervisors of the County of Nevada, State of California, hereby:

1. Approves the bidding documents and specifications for Phase 2 of the New Perimeter Fence and Gate System and authorizes the Chair of the Board of Supervisors to sign the documents.

2. Instructs the Purchasing Division to advertise for bids in accordance with applicable regulations with the bid opening date to be set by the Purchasing Agent.

PASSED AND ADOPTED by the Board of Supervisors of the County of Nevada at a regular meeting of said Board, held on the 14th day of March, 2017, by the following vote of said Board:

Ayes: Supervisors Heidi Hall, Edward Scofield, Dan Miller, Hank Weston and Richard Anderson.

Noes: None.

Absent: None.

Abstain: None.

ATTEST:

JULIE PATTERSON HUNTER
Clerk of the Board of Supervisors

By: _____

Hank Weston

Hank Weston, Chair

3/14/2017 cc: Airport*
AC*
Purchasing*

COUNTY OF NEVADA

STATE OF CALIFORNIA

BIDDING DOCUMENTS, SPECIFICATIONS
AND CONTRACT DOCUMENTS

FOR

Nevada County Airport

Perimeter Fence and Gate System Upgrades, Phase II

BIDS DUE: APRIL 18, 2017 at 3:00 PM

(DATE)

(Standard Public Works Contract)

PROFESSIONAL ENGINEERS SIGNATURE PAGE

THE SPECIAL PROVISIONS CONTAINED HEREIN HAVE BEEN PREPARED BY OR UNDER THE DIRECTION OF THE FOLLOWING REGISTERED PERSON.

2-28-17

REGISTERED CIVIL ENGINEER

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CONTRACT TIME LINE

1. BIDS DUE: **April 18, 2017 at 3:00 p.m. Local time**

2. BID OPENING: **April 18, 2017 at 3:00 p.m. Local time**

3. **MANDATORY PRE-BID MEETING: April 4, 2017 at 9:00 a.m. Local time**

4. BIDS TO REMAIN OPEN FOR **120 DAYS** FROM DATE OF OPENING OF BIDS.

5. NOTICE OF AWARD DUE WITHIN **120 DAYS** OF OPENING OF BIDS.

6. BID BONDS OF UNSUCCESSFUL BIDDERS TO BE RETURNED WITHIN **10 DAYS** OF AWARD BY COUNTY.

7. CONTRACT SIGNING AND BONDS DUE WITHIN **15 DAYS** OF NOTICE OF AWARD.

8. CONSTRUCTION MUST BEGIN WITHIN **15 DAYS** AFTER MAILING OF NOTICE TO PROCEED.

9. CONTRACTOR MUST GIVE 24 HOURS WRITTEN NOTICE OF DATE WORK WILL COMMENCE.

10. WORK MUST BE COMPLETED WITHIN **60 CALENDAR DAYS FOR THE BASE BID** OF MAILING OF THE NOTICE TO PROCEED.

INVITATION TO BID

FOR: **Perimeter Fence and Gate System Upgrades Project, Phase II**

LOCATED AT: **Nevada County Airport**

Sealed bids will be received at the office of:

County of Nevada
Purchasing Division
c/o Auditor Controller's Office
950 Maidu Avenue, Suite 230
Nevada County, CA 95959

Until **3:00 p.m.** **p.m.** local time on **April 18, 2017** for the above-referenced project.

Bids received after said time will not be accepted and will be returned unopened.

At said place and time, and promptly thereafter, all bids that have been properly submitted will be publicly opened and read aloud. Bids received after said time will not be accepted and will be returned unopened. All interested parties are invited to attend.

The work to be performed includes the following:

Clearing, grubbing and tree removal; fencing and gate demolition and removal; furnishing and installing approximately 6,100 LF of perimeter fencing and pedestrian and manual and automatic vehicle gates.

Bids shall be:

COMBINATION OF LUMP SUM AND UNIT PRICES

Bids must be for all of the work described herein unless the bid form specifically indicates a bid item is optional.

Plans, specifications, proposal forms, project manuals and all documents relating to this project can be obtained at the office of the:

County of Nevada
Purchasing Division
950 Maidu Avenue, Suite 130
Nevada County, CA 95959
Contact: Diana Wilburn at (530) 265-1766 or diana.wilburn@co.nevada.ca.us

and may be seen at the office listed above. Bidding documents, excluding plans unless they are made available, are also available electronically from www.mynevadacounty.com/nc/igs/purchasing under Requests for Proposal section. Vendors must register with the County in order to be notified of addendums and other notices. To register, please send an email to diana.wilburn@co.nevada.ca.us indicating **Nevada County Airport Perimeter Fence and Gates System Project, Phase II** in the title. If you do not receive a reply to this email indicating that you have been registered, please call 530-265-1766.

Contractor will be required to possess a **Class A** or **C13** contractor's license at the time the bid is submitted.

A non-refundable charge of **$150.00** will be made for each set of documents, and an additional charge of **$25.00** will be made if those documents are mailed.

All written requests, correspondence and/or communications of any kind regarding the project, including any sealed bids which are submitted by mail, shall be addressed to:

County of Nevada
Purchasing Division
c/o Auditor Controllers Office
950 Maidu Avenue, Suilte 230
Nevada County, CA 95959

Phone Number (530) 265-1766 or diana.wilburn@co.nevada.ca.us.

A **MANDATORY** pre-bid conference or walk-through will be held on **April 4, 2017** at the hour of **9 a.m.** at: Nevada County Airport, Airport Administration Building, 13083 John Bauer Avenue, Grass Valley, CA, 95945.

Bids will **NOT** be accepted from bidders who did not attend the pre-bid conference.

Each bidder must submit a cashier's check, certified check or a bidder's bond in an amount equal to 10% of the total amount of the bid.

The bidder to whom a contract is awarded will be required to furnish a performance bond and a labor and materials bond guaranteeing faithful performance and payment of all debts related to this contract.

The County of Nevada, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the regulations of the Department of Commerce (15 C.F.R., Part 8), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

DEPARTMENT OF INDUSTRIAL RELATIONS CONTRACTOR REGISTRATION.
Under Labor Code section 1771.1(a), it is not a violation for an unregistered contractor to submit a bid that is authorized by Public Contract Code sections 10164 or 20103.5 (projects involving federal funds), provided that the contractor is registered to perform public work pursuant to Labor Code section 1725.5 at the time the contract is awarded.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Each contractor and subcontractor must furnish certified payroll records to the Labor Commissioner at least monthly.

The County is required to provide notice to the Department of Industrial Relations of any public work contract subject to prevailing wages within five (5) days of the award.

The County of Nevada encourages its contractors and subcontractors to use the US. Citizenship and Immigration Services E-Verify system to verify that employees are eligible to work in the United States. Information about the E-Verify system is available at www.dhs.gov/e-verify.

This is a public works project. Pursuant to Sections 1770 and 1773 of the Labor Code of the State of California, the County of Nevada has ascertained that prevailing wage rates are applicable to the work to be done and are available at the State of California Department of Industrial Relations website http://www.dir.ca.gov/dlsr/PWD/index.htm. This contract is also subject to Federal Davis Bacon requirements. Contractor shall not pay less than the prevailing rate of wages of the higher of state or federal wages.

No bid will be considered unless it is made on a blank form furnished by the County of Nevada and is made in accordance with the provisions of the proposal requirements and conditions set forth in the contract documents.

The County of Nevada reserves the right to reject any or all bids.

DATED: 3/14/17

COUNTY OF NEVADA
STATE OF CALIFORNIA

By Hank Weston
Chair, Board of Supervisors

INSTRUCTIONS TO BIDDERS

FOR: **Perimeter Fence and Gate System Upgrades Project**

LOCATED AT: **Nevada County Airport**

1. DEFINITIONS:

Bidder: One who submits a bid directly to County as distinct from a sub-bidder who submits a bid to a bidder.

Successful Bidder: The lowest, qualified, responsive, responsible bidder to whom County makes an award.

Bidding Documents:

Invitation to Bid
Instruction to Bidders
Bid Form with Acknowledgement of Addenda
Bidder's Bond or other security
Experience Statement
Bidder's Representations
Additional Required Forms
- Bidder's Questionnaire and Statements
- Contractor's Certificiation of Eligibility
- Non-Collusion Declaration
- Buy American Certification
- Certifications:
  - Notice of Non-Segregated Facilities Requirement
  - Certification of Non-Segregated Facilities
  - Certification Regarding Debarment and Suspension (Bidder or Offeror)
  - Certification Regarding Debarment and Suspension (Successful Bidder)
  - Lobbying and Influencing Federal Employees
- Bidder's Statement of Contracts Subject to EEO Clause
- Statement of Surety's Intent
- Iran Contracting Act Certification
- List of Subcontractors and Service Providers
- Disadvantaged Business Enterprise (DBE) Statement
- Safety Plan Compliance Document (SPCD)

County Special Provisions
Technical Specifications
Proposed Contract Documents
Any and all Addenda

2. COPIES OF BIDDING DOCUMENTS

Complete copies of the drawings and project manual for use in preparing bids may be obtained in accordance with the Invitation to Bid.

Partial sets of bidding documents will not be issued. Complete sets of bidding documents shall be used in preparing bids. County assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents. If bidder

believes its set of bidding documents is incomplete, it shall be the responsibility of bidder to contact County to confirm that Bidder has a complete set.

County, in making copies of bidding documents available on the above terms, does so only for the purpose of obtaining bids on the work and does not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

Each bidder must be prepared to submit, within five days of County's request, written evidence of bidder's qualifications to perform the work. Bidders may be required to submit evidence that they have a practical knowledge of the particular work bid upon, and that they have the financial resources to complete the proposed work. In determining the bidder's qualifications, the following factors will be considered: work previously completed by the bidder and whether the bidder (a) maintains a permanent place of business; (b) has adequate plant and equipment to do the work properly and expeditiously; (c) has the financial resources to meet all obligations incident to the work; and (d) has appropriate technical experience. Each bidder may be required to show that he or she has handled former work so that no just claims are pending against such work. No bid will be accepted from a bidder who is engaged on any work which would impair his or her ability to perform or finance this work.

Each bidder must hold a current valid contractor's license at the time of bidding or the bid will be rejected.

4. INSPECTION OF SITE OF WORK

Bidders are required to inspect the site of the work in order to satisfy themselves, by personal examination or by such other means as they may prefer, of the location of the proposed work and as to the actual conditions of and at the site of work. If, during the course of the examination, bidder finds facts or conditions that appear confusing to bidder, bidder shall apply to County for additional information and explanation before submitting the bid. However, no such supplemental information so requested or furnished shall vary the terms of the specifications or the Contractor's sole responsibility to satisfy himself or herself as to the conditions of the work to be performed, unless an addendum has been issued.

The submission of a bid by the bidder shall constitute the acknowledgement that, if awarded the contract, bidder has relied and is relying on bidder's examination of (a) the site of the work, (b) the access to the site, and (c) all other data, matters, and things requisite to the fulfillment of the work and on bidder's own knowledge of existing conditions on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of County. No claim for additional compensation will be allowed which is based upon a lack of knowledge of the above items.

Where technical reports or data have been utilized in the preparation of the contract documents, bidder may rely upon the accuracy of the technical data contained in such reports but not upon the interpretations or opinions contained therein for the completeness thereof for the purpose of bidding or construction.

Where plans and specifications contain drawings of physical conditions in or relating to existing surface conditions, including underground facilities, which are at or contiguous to the site, bidder may rely upon the accuracy of the data contained in such drawings but not upon the completeness thereof for the purposes of bidding or construction. If a mass diagram has been prepared for a project, it is for design purposes only. If it is made

available to bidders, County assumes no responsibility whatever for the information contained therein and makes no guarantees with respect to reliance thereon.

Before submitting a bid, each bidder will, at bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which bidder deems necessary to determine its bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the contract documents.

On request in advance, County will provide each bidder access to the site to conduct such explorations and tests, as each bidder deems necessary for the submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

The lands upon which the work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the work are identified in the contract documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by County unless otherwise provided in the contract documents.

5. EXAMINATION OF CONTRACT DOCUMENTS

The contract documents shall consist of the following:

1. Invitation to Bid;
2. Instructions to Bidders;
3. Contractor's Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award);
4. Contract;
5. Addenda which pertain to the Contract;
6. The Bonds or other security;
7. Any supplementary conditions or any and all written agreements amending or extending the work, time or price contemplated;
8. The Plans and Specifications and Drawings as identified in the Contract;
9. Certificates of Insurance.

Each bidder shall thoroughly examine and be familiar with legal and procedural documents, general conditions, specifications, drawings and addenda (if any). The submission of a bid shall constitute an acknowledgement upon which County may rely that the bidder has thoroughly examined and is familiar with the contract documents. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve that bidder from any obligation with respect to that bidder's bid or to the contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract documents.

6. INTERPRETATION OF CONTRACT DOCUMENTS

No oral representations or interpretations will be made to any bidder as to the meaning of the contract documents. Any ambiguities, inconsistencies in the plans and specifications or other contract documents, or problems which are visible by an inspection of the site or

review of the contract documents shall be resolved prior to bidding. Request for an interpretation shall be made in writing and delivered to County at least ten (10) days before the time announced for opening of the proposals. Interpretations by County will be in the form of an addendum to the contract documents and, when issued, will be sent as promptly as is practical to all parties to whom the bid documents have been issued. All such addenda shall become part of the contract. County reserves the right to amend any contract language, which it determines, is ambiguous prior to award of the bid.

7. ADDENDA

Each bid shall include specific acknowledgment, in the space provided, of receipt of all addenda issued during the bidding period. Failure to so acknowledge will result in the bid being rejected as not responsive. The Contractor is responsible for verifying that all addenda have been received and for obtaining all addenda prior to submitting bids for the work.

Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Addenda may also be issued to modify the bidding documents as deemed advisable by County.

Addenda will be mailed or delivered to all parties recorded as having received the bidding documents. No addenda will be issued later than four (4) days prior to the date for receipt of bids except an addendum, if necessary, postponing the date for receipt of bids or withdrawing the request for bids.

8. BIDS

Bids shall be made on the blank forms prepared by County and included herein. Bidders may extract these pages from the book of specifications or submit the entire book. All bids shall give prices, both in writing and in figures, and shall be signed by the bidder or bidder's authorized representative with bidder's address and shall provide all other information requested on the bid form. If the bid is made by an individual, his or her name, signature and post office address must be shown; if made by a firm or partnership, the name and post office address of the firm or partnership must be shown; if made by a corporation, the bid shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation.

9. SUBMISSION OF BIDS

Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be included in a sealed envelope addressed to the Nevada County, Purchasing Division. If mailed, the bids shall be addressed to:

County of Nevada
Purchasing Division
950 Maidu Avenue, Suite 230
Nevada County, CA 95959

If delivered in person, the bids shall be submitted to:

County of Nevada

Purchasing Division
c/o Auditor Controllers Office
950 Maidu Avenue, Suilte 230
Nevada County, CA 95959

The bid shall be identified on the outside with the bidder's name, license number and address and with the project title.

Each bid shall be accompanied by the bid security and other required documents.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof.

Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the Invitation to Bid, or the modified time and date indicated by addendum. Bids received after the time and date for receipt of bids will be returned unopened. Bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.

Oral, telephone, or fax bids are invalid and will not receive consideration. No bidder may submit more than one bid. Multiple bids under different names will not be accepted from one firm or association.

10. PRE-BID CONFERENCE OR WALK-THOUGH

A **MANDATORY** pre-bid conference or walk-through will be held at:

Nevada County Airport, Airport Administration Building
13083 John Bauer Avenue, Grass Valley, CA, 95945

April 4, 2017 at 9:00 a.m. Local Time

At the time and date stated in the Invitation to Bid, the representatives of County, any consultants and/or Project Engineer will be present to answer questions. Any questions which, in the opinion of County, cannot be answered by direct reference to the bidding documents will be answered by formal written addenda as outlined above.

The pre-bid conference or walk-through may include a tour of the site of the work conducted by representatives of County. All interested parties are invited to attend.

11. BID PRICE

The bid price shall include everything necessary for the completion of construction and fulfillment of the contract including, but not limited to, furnishing all materials, equipment, tools, plant and other facilities and all management, superintendence, labor and services, except as may be provided otherwise in the contract documents.

In the event of a difference between the price quoted in words and a price quoted in figures for the same quotation, the words shall be considered the amount bid. Discrepancies between the indicated sum or total of figures and the correct sum or total will be resolved in favor of the correct sum or total.

12. BASIS OF BIDS

The bidder shall submit both a lump sum price and prices for all unit cost items and alternatives shown on the bid form. Failure to comply may be cause for rejection. Award of contract shall be to the low, responsive, responsible bidder on the base bid.

Where specific quantities are given, they are approximate only, being given as a basis for the comparison of bids, and the County of Nevada does not, expressly or by implication, warrant that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work or to omit portions of the work as may be deemed necessary or advisable by County. The amount of the bid for comparison purposes will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

The bidder shall set forth for each item of work in clearly legible figures, an item price and a total for the item in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Total" column shall be the extension of the item price bid on the basis of the estimated quantity for the item.

In case of discrepancy between the item price and the total set forth for the item, the item price shall prevail; however, if the amount set forth as an item price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or in the case of unit basis items is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

a. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the item price.

b. As to the lump sum items, the amount set forth in the "Total" column shall be the item price.

In accordance with the provision of Section 6707 of the State Labor Code, each bidder shall list, in any bid item calling for trenching of five (5) feet or more in depth, the amount contained in the proposal for adequate trench and excavation sheeting, shoring, and bracing or equivalent method for the protection of life and limb which shall conform to applicable Safety Orders.

13. TAXES

Bid prices shall include allowance for all federal, state and local taxes.

14. CONTRACT TIME

The date by which the work is to be completed (the contract time) is set forth in the contract documents.

15. SUBSTITUTE MATERIAL AND EQUIPMENT

The contract, if awarded, will be on the basis of material and equipment described in the drawings or specified in the specifications without consideration of possible substitute or "co-equal" items. Whenever it is indicated in the drawings or specified in the specifications that a substitute or "co-equal" item of material or equipment may be furnished or used by

Contractor if acceptable to County, application for such acceptance will not be considered by County until after the effective date of the contract unless an addendum is issued to all bidders authorizing the use of a specified substitute. The procedure for submittal of any such application by Contractor and consideration by County is set forth in the contract documents.

16. LIST OF SUBCONTRACTORS

Each bid shall have listed on the form provided herewith the name and address of each subcontractor to whom the bidder proposes to sublet portions of the work in excess of one-half of one percent of the total amount of the bid, or, in the case of bids for construction of streets or highways, including bridges, in excess of one-half of one percent of the Contractor's total bid or $10,000, whichever is greater, per Public Contracts Code Sections 4104. For the purpose of this paragraph, a subcontractor is defined as one who contracts with the Contractor to furnish materials and labor, or labor only for the performance of work at the site of the work.

County has the right to review the suitability and qualifications of any subcontractor or supplier proposed by the Contractor. As part of this review County may request an experience statement with pertinent information as to similar projects and other evidence of qualification for each subcontractor, person and organization. If County, after due investigation, has reasonable objection to any proposed subcontractor, County may, before giving the notice of award, request the apparent successful bidder to submit an acceptable substitute without an increase in bid price. If the apparent successful bidder does not make such substitution, the contract shall not be awarded to such bidder, but Contractor's failure to make such substitution will not constitute grounds for sacrificing the bid security. Any subcontractor, other person or organization so listed and to whom County does not make written objection prior to the giving of the notice of award will be deemed acceptable to County subject to revocation of such acceptance after the effective date of the agreement as provided in the contract documents.

No Contractor shall be required to employ any subcontractor, other person or organization against whom Contractor has reasonable objection.

The Contractor may not change any subcontractor listed on its bid without written approval from County after a determination that the requirements of Public Contracts Code Section 4107 have been met.

17. BID GUARANTY (BID BOND)

The bid shall be accompanied by a bid guaranty bond (bid bond) duly completed on the form provided herewith or a form which is substantially similar, by a guaranty company authorized to carry on business in the State of California, for payment to County in the sum of at least ten (10%) percent of the total amount of the bid, or alternatively by a certified or cashier's check, payable to County in the sum of at least ten (10%) percent of the total amount of the bid. A bid bond form which provides further payment of attorney's fees or which contains a termination date will not be considered to be "substantially similar". The amount payable to County under the guaranty bond, or the certified or cashier's check and the amount thereof, as the case may be, shall be forfeited to County as liquidated damages in case of a failure or neglect of the bidder to furnish, execute and deliver to County the required performance and payment bonds, evidence of insurance, and to enter into, execute and deliver to County the contract on the form provided herewith, within **15 days** after being notified in writing by County that the award has been made and the agreement is ready for execution.

All bonds shall have a power of attorney authorizing the signature of the person authorized to sign on behalf of the Surety attached to the bond. The power of attorney signature and the principal's signature shall each (both) be notarized.

The bid bond shall name County as beneficiary and shall specify that the bond is valid for the bid opening of this project as scheduled in the Invitation to Bid.

18. RETURN OF BID GUARANTEES

Within **ten (10) days** after the bids are awarded, County will return the bid guarantees (other than bid bonds) accompanying the bids for bids not considered in making the award. All other bid guaranties will be held until the contract has been fully executed, after which they will be returned to the respective bidders whose bids they accompany.

19. MODIFICATION OR WITHDRAWAL OF BIDS

Bids submitted early may be modified or withdrawn by notice to the party receiving bids at the place and prior to the time designated for receipt of bids. Such notice shall be in writing over the signature of the bidder or be by fax; if by fax, written confirmation over the signature of bidder must have been mailed and postmarked on or before the date and time set for receipt of bids; it shall be so worded as not to reveal the amount of original bid. Bids may also be modified or withdrawn in person by the bidder or an authorized representative provided bidder can prove bidder's identity and authority. Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these instructions to bidders.

If, within 24 hours after bids are opened, any bidder files a duly signed written notice with County and promptly thereafter demonstrates to the reasonable satisfaction of County that there was a material and substantial mistake in the preparation of the bid, that bidder may withdraw his or her bid and the bid security will be returned. Thereafter, that bidder will be disqualified from further bidding on the work.

20. OPENING OF BIDS

Bids will be opened publicly and read aloud. An abstract of the amounts of the base bids and major alternates (if any) will be made available after the opening of the bids.

21. BIDS TO REMAIN OPEN

All bids shall remain open and subject to acceptance for a period of **one hundred twenty (120) days** from the date of opening, but County may, in County's discretion, release any bid and return the bid security prior to that date.

22. POSTPONEMENT OF OPENING

County reserves the right to postpone the date and time for opening of bids at any time prior to the date and time announced in the advertisement.

23. AWARD OF CONTRACT

The award of the contract, if awarded, will be made to the lowest responsive, responsible bidder whose bid complies with all the requirements stated herein. Within **one hundred twenty (120) days** after the time of opening the bids, County will act either to accept a proposal or to reject all proposals. The acceptance of a proposal will be evidenced by a

notice of award of contract in writing, delivered in person or by mail to the bidder whose proposal is accepted. No other act of County shall constitute acceptance of a bid. The award of contract shall obligate the bidder whose bid is accepted to furnish a performance bond, payment bond and evidence of insurance (certificates of insurance and endorsements specified in the contract) and execute the agreement set forth in the contract documents

County reserves the right to reject any and all bids and to waive any and all formalities, and the right to disregard all non-conforming, non-responsive, or conditional bids. County reserves the right to reject the bid of any bidder if County believes that it would not be in the best interest of the project to make an award to that bidder, whether because the bid is not responsive or the bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by County. County reserves the right to reject any bids which omit a bid on any one or more items on which bids are required; any bids which omit unit prices if unit prices are required; any bids in which unit prices are unbalanced in the opinion of County; any bid accompanied by insufficient or irregular bid security; and any bids from bidders who have previously failed to perform properly or to complete on time contracts of any nature.

It is County's intent to accept alternates (if any are accepted) in the order in which they are listed in the bid form, but County may accept them in any order or combination.

County may consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of subcontractors and other persons and organizations must be submitted as provided herein. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by County.

If there is reason to believe that collusion exists among the bidders, none of the bids of the participants in such collusion will be considered, and County may likewise elect to reject all bids received.

County may conduct such investigations as County deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications and financial ability of the bidders, proposed subcontractors and other persons and organizations to do the work in accordance with the contract documents to County's satisfaction within the prescribed time. County reserves the right to reject the bid of any bidder who does not pass any such evaluation to County's satisfaction.

If the contract is to be awarded, it will be awarded to the lowest bidder whose evaluation by County indicates to County that the award will be in the best interests of the project.

24. SIGNING OF AGREEMENT

When County gives a Notice of Award to the successful bidder, it will be accompanied by unsigned counterparts of the agreement and all other contract documents.

Five (5) copies of the contract documents will be prepared by County. All copies will be submitted to Contractor, and Contractor shall execute the contract, insert executed copies of the required bonds and power of attorney, and submit all copies to County within **15 calendar days**. The date of execution of the contract shall be left blank for filling in by County.

County will execute all copies, insert the date of signing the contract on the contract and bond forms and on the power-of-attorney and distribute one copy each to County and Contractor. Contractor shall be responsible for distribution of copies to the Surety(ies).

Notwithstanding any action by County to the contrary or by the Board of Supervisors in accepting a bid, there shall be no contract between bidder and County until the contract documents are signed by County.

Failure of the Contractor to execute the contract within the specified time shall be just cause for withdrawal of the contract award by the County and forfeiture by the Contractor of the bid guaranty bond.

25. NOTICE TO PROCEED

County shall give the successful bidder written notice to proceed with the work within **30 days** of the execution of the contract, depending on the availability of Federal funds. Notwithstanding any other provision of the contract, County shall not be obligated to accept or to pay for any work furnished by the Contractor prior to delivery of notice to proceed whether or not County has knowledge of the furnishing of such work.

26. PERFORMANCE AND OTHER BONDS

The contract documents set forth County's requirements as to performance and other bonds. When the successful bidder delivers the executed contract to County, it shall be accompanied by the required contract security. The bonds shall be provided on County's forms or on forms which are substantially similar. Notwithstanding any language contained in the bonds, County shall not be liable for attorney's fees either for the enforcement of the bond or for any other action under this Contract. Bonds shall not contain any date of termination.

27. CONTRACTUAL RESTRICTIONS

No official of County who is authorized in such Nevada County and on behalf of County to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspecting, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for County who is authorized in such Nevada County and on behalf of County who is in any legislative, executive, supervisory, or other similar function in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

28. POSTING SECURITY IN LIEU OF RETENTION

The Contractor may elect to receive one hundred percent (100%) of payments due under this contract from time to time, without retention of any portion of the payment by the public agency, by depositing securities of equivalent value with County in accordance with the provisions of Section 22300 of the California Public Contract Code; except that no such substitution shall be allowed where federal money is funding the project and federal regulations or policies would prohibit such substitution of securities for the retention. Securities eligible for investment shall include those listed in Section 16430 of the California Government Code, or bank or savings and loan certificates of deposits. Such securities, if

deposited by the bidder, shall be valued by County whose decision on the valuation of the securities shall be final. The bidder shall be the beneficial owner of any securities substituted for money withheld and shall receive any interest thereon.

29. LIQUIDATED DAMAGES

The County is authorized by Government Code Section 53069.85 to assess liquidated damages for delay. County refers bidders to the Contract for review of the liquidated damages provision to be included in this contract. Refer to FAA Section 80 Execution and Progress; 80-08.

30. DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

In order to meet FAA requirements, the County encourages the participation of Disadvantaged Business Enterprises (DBEs), as defined in 49 CFR 26 in the performance of contracts financed in whole or in part with Federal Funds. The Contractor shall not discriminate on the basis of race, national origin, or sex in the award and performance of subcontracts.

Bidders are advised that, as required by federal law, the County and FAA has established a DBE goal. This County federal-aid contract is considered to be part of the DBE goal. The County is required to report to the FAA on DBE for all Federal-aid contracts each year.

All DBE forms attached to this contract document shall be filled out by the Contractor per these specifications.

The race neutral DBE availability advisory for this project is 7.1% of the total bid amount. Based on the Ninth Circuit Court Decision in the Western States Paving Company v. Washington State Department of Transportation, Nevada County and the Nevada County Airport has determined it is appropriate to use a race/gender-neutral DBE goal. The County encourages all Contractors to take active race/gender-neutral steps to include DBEs in this and other airport contracts. Race/gender-neutral steps include the following: unbundling large contracts; identifying portions of work for subcontracting; provision of assistance in bonding and financing; technical assistance, etc. This contract can be awarded without the lowest responsive bidder meeting the goal.

There are no requirements for MBE, Disabled Veteran Owned Business Enterprises, or Service Disabled Veteran Owned Small Business Enterprises.

CHECKLIST OF DOCUMENTS ENCLOSED BY BIDDER

Bidder shall acknowledge he or she has enclosed all required Bidding Documents listed herein by signing his or her initials in "Bidder" column, after each item.

DOCUMENT	SIGNATURES	
	BIDDER	COUNTY REP.
1. BID FORM, including Acknowledgment of Addenda (signed)		
2. BID SECURITY: Bid Bond (must be signed by corporate surety); or Cashier's check; or Certified Check; or Cash		
3. EXPERIENCE STATEMENT FORM		
4. BIDDER'S REPRESENTATIONS: (BIDDER'S QUALIFICATIONS, WORKER'S COMPENSATION)		
5. BIDDER'S QUESTIONNNAIRE AND STATEMENTS		
6. CONTRACTOR'S CERTIFICATION OF ELIGIBILITY		
7. NON-COLLUSION DECLARATION		
8. BUY AMERICAN CERTIFICATION		
9. CERTIFICATIONS: NOTICE OF NON-SEGREGATED FACILITIES REQUIREMENT, CERTIFICATION OF NON-SEGREGATED FACILITIES, CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (BIDDER OR OFFEROR), CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (SUCCESSFUL BIDDER), LOBBYING AND INFLUENCING FEDERAL EMPLOYEES		
10. BIDDER'S STATEMENT OF CONTRACTS SUBJECT TO EEO CLAUSE		
11. STATEMENT OF SURETY'S INTENT		
12. IRAN CONTRACTING ACT CERTIFICATION		

13. LIST OF SUBCONTRACTORS AND SERVICE PROVIDERS		
14. DISADVANTANGED BUSINESS ENTERPRISE (DBE) STATEMENT		
15. SAFETY PLAN COMPLIANCE (SPCD) CERTIFICATION		

BID FORM

(Nevada County Standard Form Bid Document)

BID TO THE COUNTY OF NEVADA FOR: Nevada County Airport Perimeter Fence and Gate Upgrades Project, Phase II

Name of Bidder: _____

The work to be done and referred to herein is in Nevada County, State of California, and shall be constructed in accordance with the Plans, Specifications (including the payment of not less than the wage rates set forth therein) and the Contract annexed hereto.

The work to be done is shown on project documents entitled: Plans and specifications for the Nevada County Airport Perimeter Fence and Gate Upgrades Project.

The undersigned, as bidder, declares that the only persons or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation, and in submitting this bid, the undersigned bidder agrees that he or she has carefully examined the location of the proposed work, the annexed proposed form of contract, and the plans therein referred to and all other documents listed or incorporated in the bidding documents and contract documents; and bidder proposes, and agrees if this bid is accepted, that bidder will contract with the County of Nevada in the form of the copy of the contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the contract, in the manner and time therein prescribed, and according to the requirements of County as therein set forth, and that bidder will take in full payment therefor the following:

Item No.	Item	Unit of Measure	Estimated Quantity	Item Price	Total
1.	Clearing & Grubbing	SY	13,600		
2.	Temporary Air & Water Polloution, Soil Erosion & Siltation	LS	1		
3.	8-Foot PVC Coated Chain Link Fence	LF	6,100		
4.	4-Foot Pre-hung pedestrian Gate with Cipher lock	EA	5		
5.	16-Foot Automatic Cantilever Vehicle Gate with card reader, key pad & call box	EA	1		
6.	16-Foot Automatic Cantilever Vehicle Gate with card reader & key pad	EA	2		
7.	12-Foot Manual Double Swing Vehicle Gate	EA	1		
8.	16-Foot Manual Double Swing Vehicle Gate	EA	1		
9.	20-Foot Manual Double Swing Vehicle Gate	EA	2		
10.	Removal of Existing Fence & Gates	LF	5,900		
11.	Project Survey & Stakeout	LS	1		
12.	Mobilization (6% Maximum)	LS	1		

13.	Class 2 Aggregate Base	CY	8		
TOTAL OF BID (in figures): _____					
TOTAL OF BID (in words): _____					

The undersigned bidder agrees to furnish the required bonds or other security and to enter into a contract within the time specified in the Instructions to Bidders, and further agrees to complete all work by the bid, in accordance with all requirements the contract.

Receipt of copies of the following addenda is hereby acknowledged.

Addendum No.	Bidder's Signature	Date Acknowledged
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

All addenda received have been considered in preparation of this bid.

Enclosed herewith are the Bid Form, Bid Bond or other security, Experience Statement, Subcontractor Listing and Bidder's Representations form.

In submitting this bid it is understood that the right is reserved by County to reject any and all bids, and it is understood that this bid may not be withdrawn during the period set forth in the Instructions to Bidders.

Envelopes containing bids must be marked as required by the Instructions to Bidders.

County reserves the right to reject any and all bids and to waive any irregularities in bids.

The amount of the bid for comparison purposes will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

Prices bid shall include overhead, profit and all applicable taxes.

By submission of this bid, each bidder certified, and in the case of a joint bid each party thereto certifies as to its own organization, that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other bidder or with any competitor.

A bid bond will accompany this bid in a sum of not less than ten percent (10%) of the total amount of the bid and shall be on a form approved by County or a form which is substantially similar, which is attached thereto.

If this bid shall be accepted and the undersigned shall fail to contract as aforesaid, and to give the performance bond and labor and material bond as required in the contract with a surety satisfactory to County within the number of days set forth in the Instructions to Bidders after receipt of notice that the contract has been awarded to the undersigned, County may, at its option, determine that the bidder has abandoned the contract and thereupon the award of the contract shall be null and void and the bidder and surety shall forfeit the security accompanying this bid to the County of Nevada.

Accompanying this bid is _____

_____
("Bidder's Bond", "Cashier's Check", "Certified Check" or "Cash")

for $_____ an amount equal to ten percent (10%) of the total bid.

The names of individuals who are principals in any partnership, joint venture, business association or corporation in the foregoing bid are as follows:

_____ _____

_____ _____

Licensed in accordance with an act providing for the registration of contractors, License No. _____.

Dated: _____ _____

_____
Authorized Signature of Bidder

BUSINESS ADDRESS: _____

PLACE OF RESIDENCE: _____

TELEPHONE NUMBER: _____

CLASSIFICATION OF CONTRACTOR'S LICENSE: _____

EXPIRATION DATE OF CONTRACTOR'S LICENSE: _____

FEDERAL TAX ID. NO.: _____

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if bidder is a co-partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if bidder is an individual, his or her signature shall be placed above. If a bidder is a joint venture, the documents must be signed by an authorized officer of each firm to the joint venture and shall include the California Contractor's License number of each partner to the joint venture. The signature of any attorney-in-fact must be notarized.

BIDDER'S BOND

STATE OF CALIFORNIA

COUNTY OF NEVADA

KNOW ALL PERSONS BY THESE PRESENT,

That we _____

_____

_____

_____, as principal, and

_____

_____

_____

as surety, are held and firmly bound unto the County of Nevada in the sum of ten percent (10%) of the total amount of the bid of the principal above named, submitted by said principal to the County of Nevada for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the County of Nevada, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of $_____.

The condition of this obligation is such that whereas the principal has submitted the above-mentioned bid to the County of Nevada, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Nevada County, California, on _____, for:

_____

NOW, THEREFORE, if the aforesaid principal is awarded the contract, and within the time and manner required by the contract documents, after the prescribed forms are presented to him or her for signature, enters into a written Contract, in the prescribed form, in accordance with the bid, and files two bonds with the County of Nevada, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect.

Notice to Surety shall be provided at:

_____

_____

_____

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____ A. D. 20_____.

_____Seal

_____Seal

_____Seal
Principal

_____Seal

_____Seal

_____Seal
Surety

NOTE: Signature of Surety shall be notarized. Power of attorney for surety with corporate seal affixed must be attached.

EXPERIENCE STATEMENT

The following outline is a record of the bidder's recent experience in construction of a type similar in magnitude and character to that contemplated under this contract.

BIDDER'S REPRESENTATIONS

I, the undersigned, declare as follows:

1. BIDDER'S QUALIFICATIONS: That neither I nor a company of which I am more than 50% owner have been disqualified from bidding, removed from a public works construction project or otherwise been prevented from bidding because of a violation of law or a safety regulation.

Further, I declare under penalty of perjury that neither I nor a company of which I am more than a 50% owner, have had more than one final, unappealable finding of contempt of court by a federal court within the immediately preceding two year period because of failure to comply with an order of the Federal court (Public Contract Code Section 10232), which orders the Contractor to comply with an order of the National Labor Relations Board.

Further, I declare under penalty of perjury that I have not been convicted by any court of any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of state or federal antitrust law in connection with the bidding upon, award of, or performance of any public works contract.

2. WORKER'S COMPENSATION CERTIFICATION (LABOR CODE SECTION 1861): That I am aware of the provisions of Section 3700 of the Labor Code of the State of California, which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: _____ BIDDER:

By: _____

BIDDER'S QUESTIONNAIRE AND STATEMENTS

California Public Contract Code Section 10162

All prospective bidders, under penalty of perjury, shall complete the following questionnaire. Has such prospective bidder, any officer of such bidder, or any employee of such bidder who has a proprietary interest in such bidder, has ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

YES _____ NO

If so, explain the circumstances in the space below.

A bid may be rejected on the basis of a bidder, any officer of such bidder, or any employee of such bidder who has a proprietary interest in such bidder, having been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local project because of a violation of law or a safety regulation.

California Public Contract Code Section 10232

In accordance with Public Contract Code Section 10232, the prospective bidder, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the bidder within the immediately preceding two year period because of the bidder's failure to comply with an order of a federal court which orders the bidder to comply with an order of the National Labor Relations Board. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement.

California Public Contract Code Section 10285.1

In accordance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder (has ____)

(has not ____) been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible

managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement.

(This form must be completed and submitted with the Proposal.)

CONTRACTOR'S CERTIFICATION OF ELIGIBILITY

The bidder/offeror certifies, by submission of this proposal or acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

The bidder/offeror further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the bidder/offer/contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

That the information above is true and complete to the best of my knowledge.

_____

Printed Name and Title

_____ _____

Signature Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

The full names and residences of all persons interested in this proposal as principals are as follows:

_____

_____

_____

_____

_____

_____

_____

(This form must be completed and submitted with the Proposal.)

NON-COLLUSION DECLARATION

Title 23 United States Code Section 112 and California Public Contract Code Section 7106

The undersigned declares:

I am the _____of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing non-collusion declaration, bidder questionnaires and statements, in accordance with California Public Contract Code Sections 7106, 10162, 10232, and 10285.1, is true and correct and that this declaration is executed on _____ [date], at _____ [County], _____ [state].

Affix Seal
if Principal
is Corporation

BIDDER: _____

BY: _____

TITLE: _____

STATE OF CALIFORNIA)
SS:
COUNTY OF _____)

On the _____ day of _____, 20___, before me personally came _____

to me known, who, being by me duly sworn, did swear and affirm that he/she resides at _____

_____; that he/she is the _____
of the Bidder herein and signs the foregoing non-collusion declaration, bidder questionnaires and statements, in accordance with California Public Contract Code Sections 7106, 10162, 10232, and 10285.1 on behalf of such Bidder; that he/she executed the foregoing California Public Contract Code requirements; and that, to the best of his knowledge and belief, the statement made in the foregoing declarations and are true.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES:_____

(This form must be completed and submitted with the Proposal.)

BUY AMERICAN CERTIFICATION

Certificate of Buy American Compliance for Manufactured Products

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States, or;

b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;

c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the "item". The required documentation for a type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as

non-domestic products in their entirety).

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

_____	_____
Date	Signature
_____	_____
Company Name	Title

(These forms must be completed and submitted with the Proposal.)

CERTIFICATIONS

BIDDER'S NAME: _____

ADDRESS: _____

TELEPHONE NO.: _____ **FAX NO.** _____

IRS EMPLOYER IDENTIFICATION NUMBER: _____

NOTICE OF NONSEGREGATED FACILITIES REQUIREMENT

Notice to Prospective Federally Assisted Construction Contractors

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a federally-assisted construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving federally-assisted construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.
3. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.

Notice to Prospective Subcontractors of Requirements for Certification of Non-Segregated Facilities

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding $10,000, which is not exempt from the provisions of the Equal Opportunity Clause.
2. Contractors receiving subcontract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause.
3. The penalty for making false statements in offers is prescribed in 18 U.S.C. § 1001.

* * * * *

CERTIFICATION OF NON-SEGREGATED FACILITIES

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker

rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

* * * * *

CERTIFICATE REGARDING DEBARMENT AND SUSPENSION (BIDDER OR OFFEROR)
(Required for all contracts and subcontracts that exceed $25,000.)

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

Contractor certifies that Contractor is not identified on a list created pursuant to subdivision (b) of Section 2203 of the Public Contract Code as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5 of the Public Contract Code, or as a person described in subdivision (b) of Section 2202.5 of the Public Contract Code, as applicable. Such certification information shall be submitted to the Department of General Services by Owner. Such certification is not require if Contractor has been permitted to submit a bid or proposal to Owner pursuant to subdivision (c) or (d) of Section 2203 of the Public Contract Code.

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (SUCCESSFUL BIDDER REGARDING LOWER TIER PARTICIPANTS)

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov

2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.

3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

* * * * *

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES
(Required for all contracts and subcontracts that exceed $100,000.)

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Printed Name & Title: _____

Signature: _____

Date: _____

(This certification must be completed and submitted with the Proposal.)

BIDDER'S STATEMENT OF PREVIOUS CONTRACTS SUBJECT TO EEO CLAUSE AS DESCRIBED IN SECTION 70-21

The Bidder shall complete the following statement by checking the appropriate boxes.

The Bidder has ____ has not ____ participated in a previous contract subject to the Equal Opportunity Clause prescribed by Executive Order 11246, as amended, of September 24, 1965.

The Bidder has ____ has not ____ submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.

If the Bidder has participated in a previous contract subject to the Equal Opportunity Clause and has not submitted compliance reports due under applicable filing requirements, the Bidder shall submit a compliance report on Standard Form 100, "Employee Information Report EEO-1", attached to this proposal.

_____
(Firm or Corporation Making Bid)

_____
(Signature of Authorized Person)

P.O. Address: _____

Dated: _____

(This form must be completed and submitted with the Proposal.)

STATEMENT OF SURETY'S INTENT

TO: Nevada County Airport

We have reviewed the bid of _____
(Contractor)

of _____
(Address)

for the Perimeter Fence and Gate Upgrades Project, Phase II,

project for which bids will be received on: April 18, 2017
(Bid Opening Date)

and wish to advise that should this Bid of the Contractor be accepted and the Contract awarded to him, it is our present intention to become surety on the performance bond and labor and material bond required by the Contract.

Any arrangement for the bonds required by the Contract is a matter between the Contractor and ourselves and we assure no liability to you or third parties if for any reason we do not execute the requisite bonds.

We are duly authorized to do business in the State of California.

ATTEST: _____ _____

_____
Surety's Authorized Signature(s)

(Corporate seal, if any. If no seal, write "No Seal" across this place and sign.)

ATTACH PROPOSAL GUARANTEE

ATTACH POWER OF ATTORNEY

**(This form must be complete and submitted with the Proposal.
Copies of this form may be filled out and attached to this page.)**

IRAN CONTRACTING ACT CERTIFICATION

(Public Contract Code Section 2200 et seq.)

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 et seq.) is true and correct:

☐ The Contractor is not:

(i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or

(ii) a financial institution that extends, for 45 days or more, credit in the amount of $20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

☐ The Authority has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, Agency will be unable to obtain the goods and/or services to be provided pursuant to the Contract.

☐ The amount of the Contract payable to the Contractor for the Work does not exceed $1,000,000.

Signed_____

Titled_____

Firm_____

Date_____

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of $250,000 or twice the Contract Price, termination of the Contract and/or ineligibility to bid on contracts for three years

(This form must be completed and submitted with the Proposal.)

LIST OF SUBCONTRACTORS
AND PROFESSIONAL SERVICES PROVIDERS

The bidder is required to furnish the following information in accordance with the provisions of Section 4100 to 4113, inclusive, of the Public Contract Code of the State of California. ***All entities that will be providing work or services on this project must be included in this list.***

Name Subcontractor is licensed under: _____
License Number: _____
Address of Subcontractor: _____
Percent (%) of Total Contract: _____
Specific Description of Subcontract: _____

Name Subcontractor is licensed under: _____
License Number: _____
Address of Subcontractor: _____
Percent (%) of Total Contract: _____
Specific Description of Subcontract: _____

Name Subcontractor is licensed under: _____
License Number: _____
Address of Subcontractor: _____
Percent (%) of Total Contract: _____
Specific Description of Subcontract: _____

Name Subcontractor is licensed under: _____
License Number: _____
Address of Subcontractor: _____
Percent (%) of Total Contract: _____
Specific Description of Subcontract: _____

Name Subcontractor is licensed under: _____
License Number: _____
Address of Subcontractor: _____
Percent (%) of Total Contract: _____
Specific Description of Subcontract: _____

(This form must be completed and submitted with the Proposal. Copies of this form may be filled out and attached to this page.)

DISADVANTAGED BUSINESS ENTERPRISE (DBE) STATEMENT

The requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of the Sponsor to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit proposals. Award of this contract will be conditioned upon satisfying the DBE requirements of this contract. These requirements apply to all bidders, including those who qualify as a DBE. A DBE contract goal of 10 percent has been established for this contract. The bidder shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to meet the contract goal for DBE participation in the performance of this contract. Excerpts from 49 CFR Part 26 are included in Section 70-21.13.

Within 15 days after the opening of bids and before award of the contract, all bidders/offerors wishing to remain in competition for award of this contract shall submit "The Contractor's DBE Plan" to the Owner. The bidder/offeror will be required to submit the following information: (1) the names and addresses of DBE firms that will participate in the contract; (2) a description of the work that each DBE firm will perform. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract; (3) the dollar amount of the participation of each DBE firm participating; (4) written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal; (5) written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contactor's commitment; and (6) if the contract goal is not met, evidence of good faith effort.

The Contractor's DBE Plan Form and DBE Letter Of Intent Form are located in Section 200. The website for the Unified Certification Program directory in the state of California is: http://californiaucp.org/.

CERTIFICATION OF BIDDER: The undersigned bidder will satisfy the DBE requirements of these specifications in the following manner (please check the appropriate space):

_____ The bidder is committed to meeting or exceeding the DBE utilization goal stated above on this contract.

_____ The bidder, if unable to meet the DBE utilization goal stated above, is committed to a minimum of 7.1% DBE utilization on this contract, and will submit documentation demonstrating good faith efforts.

SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) CERTIFICATION

Project Location: _____

Project Name: _____

Contractor's Official Name: _____

Contact Person: _____ Telephone: _____

Street Address: _____

County:_____State:_____Zip: _____

Certification Statement:

I certify that I have read the Construction Safety and Phasing Plan (CSPP) included in the Contract Documents and if awarded this Contract, I will abide by its requirements as written.

I certify that I have read the Safety Plan Compliance Document (SCPD) included in the Contract Documents and if awarded this Contract, I will abide by its requirements as written;

I certify that I will provide the information required in the SCPD prior to the start of construction work, if awarded this Contract, and that I will provide any additional information requested by the Owner.

_____ _____

Printed Name of Signer Signature

_____ _____

Title Date

END OF PROPOSAL

COUNTY OF NEVADA

STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

SPECIAL PROVISIONS

FOR

Nevada County Airport

Perimeter Fence and Gate System Upgrades, Phase II

Bids due: April 18, 2017

COUNTY OF NEVADA
STATE OF CALIFORNIA

SPECIAL PROVISIONS

for the Nevada County Airport Perimeter Fence and Gate System Upgrades Project, Phase II

SECTION 1. DELETED

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01 GENERAL

The Bidder's attention is directed to the bidding documents preceding these Special Provisions and the Standard Form Contract following these Special Provisions.

SECTION 3. DELETED

SECTION 4. DELETED

SECTION 5. GENERAL

SECTION 5-1. MISCELLANEOUS

5-1.01 SOUND CONTROL REQUIREMENTS

Sound control shall conform to the provisions in Section 7-1.01I, "Sound Control Requirements," of the Standard Specifications and these Special Provisions.

The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dbA at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

5-1.02 PRESERVATION OF PROPERTY

In addition to Section 7-1.11 of the Standard Specifications, the following shall apply:

> Any tree, shrub or plant used to replace an injured or damaged tree, shrub or plant shall be the same species as the tree, shrub or plant being replaced or shall be a plant species approved by the Engineer. All such replacement planting shall be completed before the start of the plant establishment period or at least 15 working days prior to acceptance of the contract if there is no plant establishment period. The minimum size

of tree or shrub replacement shall be 5 gallon. Replacement planting shall conform to the provisions in Section 20-4.05, "Planting," of the Standard Specifications.

5-1.03 AREAS FOR CONTRACTOR'S USE

The highway right-of-way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right-of-way, or allow others to occupy the right-of-way, for purposes which are not necessary to perform the required work except as provided below.

No area is available within the contract limits for the exclusive use of the Contractor. However, where available temporary storage of equipment and materials on County Property may be arranged with the Engineer but space may be limited. Use of the Contractor's work areas and other County-owned property shall be at the Contractor's own risk, and the County shall not be held liable for any damage to or loss of materials or equipment located within such areas.

The Contractor shall obtain encroachment permits prior to occupying County-owned parcels outside the contract limits. The required encroachment permits may be obtained from the Department of Public Works, Permit Engineer, Dave Borchert.

Residence trailers will not be allowed within the highway right-of-way, except that one trailer may be placed in the County right-of-way at a location to be designated by the Engineer.

The Contractor shall remove all equipment, materials and rubbish from the work areas and other County-owned property which it occupies and shall leave the areas in a presentable condition.

The Contractor shall secure at its own expense any area required for plant sites, storage of equipment or materials or for other purposes if sufficient area is not available to it within the contract limits or at the sites designated on the plans outside the contract limits.

5-1.04 TRAFFIC CONTROL

See FAA General Provisions Attachment A to Section 80, Construction Safety Phasing Plan, for Traffic Control requirements.

5-1.05 DELETED

SECTION 6. DELETED

SECTION 7. DELETED

SECTION 8. MATERIALS

SECTION 8-1. MISCELLANEOUS

SECTION 8-2. CONCRETE

8-2.01 MINOR CONCRETE

Section 90-10.02B, "Aggregate," of the Standard Specifications is amended by adding the following:

> If aggregate is found to be "deleterious" or "potentially deleterious" when tested in accordance with ASTM Designation: C 289, mineral admixtures Class N or Class F will be required in the manufacture of concrete containing such aggregate. The use of mineral admixture shall conform to the requirements in Section 90-4.08, "Required Use of Mineral Admixtures."

SECTION 9. DELETED

SECTION 10. CONSTRUCTION DETAILS

SECTION 10-1. GENERAL

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these Special Provisions.

At the end of each working day if a difference in excess of three-tenths (0.3) foot exists between the elevation of the existing pavement and the elevation of any excavation within two (2) feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose; however, once the place of the structural section commences, structural material shall be used. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 4:1 or flatter to the bottom of the excavation. Treated base shall not be used for the taper. Full compensation for placing the material on a 4:1 slope, regardless of the number of times it is required and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the contract price paid for the materials involved and no additional compensation will be allowed therefore. No payment will be made for material placed in excess of that required for the structural section.

10-1.02 DELETED

10-1.03 DELETED

10-1.04 DELETED

10-1.05 DELETED

10-1.06 DELETED

10-1.03 DUST CONTROL

Dust control shall conform to the provisions in Section 10, "Dust Control," of the Standard Specifications and these special provisions.

Dust control shall be provided by the Contractor on a daily basis including weekends and holidays. Water shall be applied as provided in Section 17, "Watering," of the Standard specifications and these Special Provisions.

The application of water shall be subject to control by the Engineer at all times and shall be applied in the amounts at the locations and at the times designated by the Engineer.

Full compensation for applying water will be considered as included in other items of work and no separate payment will be made therefore.

10-1.04 MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.08, "Public convenience," 7-1.09, "Public Safety," and 12, "Construction Area Traffic control Devices," of the Standard Specifications and these special provisions. Nothing in these special provisions shall be construed as relieving the Contractor from its responsibility as provided in said Section 7-1.09.

Illuminated traffic cones when used during the hours of darkness shall be affixed or covered with reflective cone sleeves as specified in Section 12-3.10, "Traffic Cones," of the Standard Specifications, except the sleeves shall be 7-inches long.

Lane closures shall conform to the provisions in the section of these special provisions entitled "Traffic Control System for Lane Closure."

Personal vehicles of the Contractor's employees shall not be parked on the traveled way, including any section closed to public traffic.

The Contractor shall notify local authorities of his/her intent to begin work at least 72 hours before work is begun. The Contractor shall notify all local emergency services at least 10 days prior to road closure. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make his/her own arrangements relative to keeping the working area clear of parked vehicles.

The Contractor shall provide access for emergency vehicles at all times during this contract.

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25-feet past the last vehicle or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags. The flag tree shall be placed where directed by the Engineer.

A minimum of one traffic lane, not less than 10 feet wide, shall be open for use by public traffic. When construction operations are not actively in progress, not less than two such lanes shall be open to public traffic. This will not apply during the road closure.

During hauling and excavation operations, the road may be closed and public traffic stopped for periods not to exceed 20 minutes. After each closure, all accumulated traffic shall be allowed to pass through the work before another closure is made.

The full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays and designated legal holidays after 3:00 p.m. on Fridays and the day preceding designated legal holidays and when construction operations are not actively in progress.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day and December

25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor if in the opinion of the Engineer public traffic will be better served and the work expedited. Such deviations shall not be adopted until the Engineer has indicated his/her written approval. All other modifications will be made by contract change order.

10-1.05 DELETED

10-1.06 DELETED

10-1.07 DELETED

SECTION 11. DELETED

COUNTY OF NEVADA

STATE OF CALIFORNIA

CONTRACT

FOR

NEVADA COUNTY AIRPORT

PERIMETER FENCE AND GATE SYSTEM UPGRADES, PHASE II

_____

(Date)

(Standard Public Works Contract)

NOTICE TO BIDDERS:

THE FOLLOWING CONTRACT SECTION IS INCLUDED

AS A SAMPLE

FOR INFORMATION ONLY

AND IS NOT TO BE

COMPLETED WITH BID

BOND OF FAITHFUL PERFORMANCE

KNOW ALL PEOPLE BY THESE PRESENTS THAT WE _____ _____, the Contractor in the contract annexed hereto, as principal, and _____, as surety are held and firmly bound unto the County of Nevada in the sum of _____ dollars ($_____) in lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents:

The condition of the above obligation is that if said principal as Contractor in the contract hereto annexed shall faithfully perform each and all of the conditions of said contract to be performed by Contractor, and shall furnish all tools, equipment, apparatus, facilities, transportation, labor, and material, other than material, if any, agreed to be furnished by County, necessary to perform and complete, and performs and completes in good workmanlike manner, the work of _____ in strict conformity with the terms and conditions set forth in the contract hereto annexed, then this obligation shall be null and void, otherwise to remain in full force and effect; and the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall, in any way, affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

IN WITNESS WHEREOF this instrument has been duly executed by the principal and surety above named on _____, 20__.

_____

_____
Contractor (Seal)

_____

_____
Surety (Seal)

NOTE: All signatures must be notarized. Attach Power of Attorney for Surety, sealed or certified.

BOND FOR LABOR AND MATERIAL

KNOW ALL PEOPLE BY THESE PRESENTS THAT WE _____

_____
the Contractor in the Contract hereto annexed, as principal, and

_____
are held and firmly bound unto the County of Nevada in the sum of
_____ Dollars ($_____), lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the above obligation is that if said principal, its successors or assigns, as Contractor in the Contract hereto annexed, or his, her or its subcontractor, fails to pay for any materials, provisions, provider or other supplies, or items, used in, upon, for or about the performance of the work contracted to be done by said Contractor, namely to furnish all tools, equipment, apparatus, facilities, transportation, labor and material necessary to perform and complete, and to perform and complete in a good workmanlike manner, the work of

_____
_____ in strict conformity with the terms and conditions set forth in the contract hereto annexed, or for any work or labor done thereon of any kind or for amounts due under the Unemployment Insurance Act with respect to such work or labor, or to make payments to the Employment Development Department pursuant to Civil Code Section 3248, or to pay any of the persons named in Civil Code Section 3181, said surety will pay for the same in an amount not exceeding the sum herein above set forth. This bond is executed in accordance with the requirements of Title 15 of the Civil Code and is subject to the provisions thereof, and shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under and by virtue of the provisions of Section 3181 of the Civil Code, or to their assigns; and the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications. In the event suit is brought on this bond, a reasonable attorney's fee may be fixed by the Court.

IN WITNESS WHEREOF this instrument has been duly executed by the principal and surety above named on _____, 20___.

_____

_____
Contractor (Seal)

_____

_____
Surety (Seal)

NOTE: All signatures must be notarized. Attach Power of Attorney for Surety, sealed or certified.

COUNTY OF NEVADA

STATE OF CALIFORNIA

CONTRACT

THIS CONTRACT, made this _____ day of _____, 20__, by and between the COUNTY OF NEVADA, hereinafter referred to as County and _____, hereinafter referred to as Contractor.

WITNESSETH: That the County and Contractor, for the consideration hereinafter mentioned, agree as follows:

ARTICLE I: DEFINITIONS

Wherever used in these general conditions or in the other contract documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Act of God

"Act of God" means an earthquake or flood, or other cataclysmic phenomenon of nature. A rain, windstorm, high water or other natural phenomenon of unusual intensity for the specific locality of the work, which might reasonably have been anticipated from historical records of the general locality of the work, shall not be construed as an Act of God.

Addenda

Written or graphic instruments issued prior to the opening of bids which clarify, correct or change the bidding documents.

Application for Payment

The form accepted by County which is to be used by Contractor in requesting progress or final payments and which is to include such supporting documentation as is required by the contract documents.

Contract Price

Either the total lump sum bid of the Contractor or the total of the unit price bids of the Contractor extended based upon the estimated quantities set forth in the bid, or combinations thereof, plus or minus any adjustments made in accordance with the contract.

Contractor's Plant and Equipment

Everything, except labor, brought onto the site by the Contractor in order to carry out the work, but not to be incorporated in the work.

County

The County of Nevada and any person or persons to whom the power belonging to County shall be duly designated including but not limited to an engineer or architect. Only those persons designated in writing by the County Administrator or Director of the department overseeing the project shall have authority to act on behalf of County.

Day

A calendar day of 24 hours, except when preceded by "working", as defined below.

Defective

An adjective which when modifying the word "work" refers to work that is unsatisfactory, faulty or deficient, or does not conform to the contract documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the contract documents, or has been damaged (unless responsibility for the protection thereof has been assumed by County).

Directed

"Directed", "designated", "permitted", "required", "accepted", and words of like import, wherever and in whatever manner used means as directed, designated, permitted, required, and accepted by County.

Director

"Director" shall mean the Director of the department overseeing the project.

Drawings

The drawings which show the character and scope of the work to be performed and which have been prepared or approved by County and are referred to in the contract documents.

Effective Date of the Contract

The date indicated in the Contract on which it becomes effective, but if no such date is indicated it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.

Equal

A device, material, equipment, technique or method that conforms to the intent of that specified or indicated on the Drawing.

Field Order

A written order issued by County which orders minor changes in the work but which does not involve a change in the contract price or the contract time.

Lien

Any claim by a person entitled to file a stop notice pursuant to the provisions of California Civil Code Sections 3179, et seq.

Notice of Award

The written notice by County to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, County will sign and deliver the Contract.

Notice to Proceed

A written notice given by County to Contractor fixing the date on which the contract time will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.

Partial Completion

Placing a portion of the work in service for the purpose for which it is intended (or a related purpose) before reaching completion of all the work.

Person

Includes firms, companies and corporations.

Schedule of Values

A list of divisions of the total scope of work under the contract made by the Contractor and approved by the County for purposes of progress payments.

Shop Drawings

All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the work and all product data illustrations, brochures, standard schedules, performance charts, instructions, diagrams, samples, and other information prepared by a supplier and submitted by Contractor to illustrate material or equipment for some portion of the work.

Subcontractor

An individual, firm or corporation having a direct contract with Contractor or with any other subcontractor for the performance of a part of the work at the site.

Substitute

A device, material, equipment, technique or method of construction that differs from that intended or indicated on the Drawings.

Supplementary Conditions

An addition to the Contract Documents which supplements the main Contract.

Underground Facilities

All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electriCounty, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work

Work to be paid for on the basis of unit prices.

ARTICLE II: SCOPE OF WORK

Contractor, at Contractor's own proper costs and expense, shall do all the work and furnish all the materials necessary to construct and/or reconstruct and complete in good workmanlike and substantial manner and to the satisfaction of the County, the Perimeter Fence and Gate Systems Upgrades project at the Nevada County Airport which shall be constructed in accordance with this Contract, the Invitation to Bid, the Instruction to Bidders, the Plans and Specifications and Drawings, and all other contract documents attached hereto and which are incorporated herein by reference and made a part of this Contract as if set forth in full.

ARTICLE III: CONTRACT TIME

Contractor will start work to be performed under this Contract within 15 Calendar days after the Contractor is instructed in writing by County to proceed with the work. Said work shall be diligently prosecuted to completion. All the work shall be completed and ready for acceptance

within 60 calendar days from the date of the mailing of the Notice to Proceed. When any period of time is referred to in the contract documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

ARTICLE IV: DELETED

ARTICLE V: CONTRACT PRICE

County shall pay Contractor for performance of the work in accordance with the Contract Documents in current funds as follows: _____ Dollars ($_____)

ARTICLE VI: DELETED

ARTICLE VII: DELETED

ARTICLE VIII: PRELIMINARY MATTERS

Pre-construction Conference

Within 30 days after receipt of the notice of award, but before the issuance of the Notice to Proceed, a conference attended by Contractor and County and others as appropriate will be held to discuss schedules, procedures for handling shop drawings and other submittals and for processing applications for payment, and to establish a working understanding among the parties as to the work.

Delivery of Schedules

Contractor shall submit a schedule to the County at the Pre-Construction Conference, including the following items:

1. An estimated progress schedule indicating the starting and completion dates of the various stages of the work;
2. A preliminary schedule of shop drawing submissions;
3. A preliminary schedule of product deliveries;
4. A preliminary schedule of values for all of the work which will include quantities and prices of items aggregating the contract price and will subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of work which will be confirmed in writing by Contractor at the time of submission.

Finalizing Schedules

At least ten days before submission of the first application for payment a conference attended by Contractor, County and others as appropriate will be held to finalize schedules. The finalized progress schedule will be acceptable to County as providing an orderly progression of the work to completion within the contract time, but such acceptance will neither impose on County responsibility for the progress or scheduling of the work nor relieve Contractor from full responsibility therefor. The finalized schedule of shop drawing submissions will be acceptable to County as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to County as to form and substance.

Before Starting Construction

Contractor shall provide County with at least 24 hours written notice of the date on which it intends to commence work. Before undertaking each and every part of the work, Contractor shall carefully study and compare the contract documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to County any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from County before proceeding with any work affected thereby; however, Contractor shall not be liable to County for failure to report any conflict, error or discrepancy in the contract documents, unless Contractor had actual knowledge thereof or should reasonably have known thereof.

Contractor's Representations

In order to induce County to enter into this agreement, Contractor makes the following representations:

1. Contractor has familiarized himself or herself with the nature and extent of the contract documents, work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the work.
2. Contractor has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the work which were relied upon by County in the preparation of the drawings and specifications and which have been identified in the contract documents.
3. Contractor has made or caused to be made examinations, investigations, and tests and studies of such reports and related data necessary for the performance of the work at the contract price, within the contract time and in accordance with the other terms and conditions of the contract documents; and no additional examinations, investigations, tests, reports or similar data are or will be required by Contractor for such purposes.
4. Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the contract documents.
5. Contractor has given County written notice of all conflicts, errors or discrepancies that have been discovered in the contract documents and the written resolution thereof by County is acceptable to Contractor.

ARTICLE IX: DELETED

ARTICLE X: CONTRACT DOCUMENTS

Intent

The contract documents comprise the entire agreement between County and Contractor concerning the work. The contract documents are complementary; what is called for by one is as binding as if called for by all. The contract documents will be construed in accordance with California law.

Conflicts, Errors and Discrepancies

If during the performance of the work, Contractor finds a conflict, error or discrepancy in the contract documents, Contractor shall so report to County in writing at once and before proceeding with the work affected thereby shall obtain a written interpretation or clarification from County.

Amending Contract Documents

The contract documents may be amended to provide for additions, deletions and revisions in the work or to modify the terms and conditions thereof by change order. Contract price and contract time may only be changed by change order.

Supplementary Contract Documents

In addition to the above, the requirements of the contract documents may be supplemented, and minor variations and deviations in the work may be authorized in one or more of the following ways:

1. A field order,
2. County's approval of a shop drawing or sample, or
3. County's written interpretation or clarification.

Reuse of Documents

Neither contractor nor any subcontractor or supplier or other person or organization performing or furnishing any of the work under a direct or indirect contract with County shall have or acquire any title to or ownership rights in any of the drawings, specifications or other documents (or copies of any thereof) prepared by or bearing the seal of County; and they shall not reuse any of them on extensions of the project or any other project without written consent of County and specific written verification or adaptation by County.

ARTICLE XI: THE PROJECT SITE

Availability of Lands

County shall furnish, as indicated in the contract documents, the lands upon which the work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by County, unless otherwise provided in the contract documents. If Contractor believes that any delay in County's furnishing these lands, rights-of-way or easements entitles Contractor to an extension of the contract time, Contractor may make a claim therefor as provided for herein. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Physical Conditions

If the contract documents identify those reports of explorations and tests of subsurface conditions at the site that have been utilized by County in preparation of the contract documents, Contractor may rely upon the accuracy of the factual data contained in such reports but not upon interpretations or opinions contained therein or for the completeness or representativeness thereof for Contractor's purposes. If construction drawings of physical conditions in or relating to existing surface and subsurface structures (except underground facilities discussed below) at or contiguous to the site have been utilized by County in preparation of the contract documents, Contractor may rely upon the accuracy of the factual data contained in such drawings but not the completeness thereof for Contractor's purposes. If Contractor believes that any factual data on which Contractor is entitled to rely is inaccurate, or any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the contract documents, Contractor shall, promptly after becoming aware thereof and before performing any work in connection therewith (except in an emergency as permitted herein), notify County in writing about the inaccuracy or difference. Failure to notify County promptly shall relieve County of any liability for any and all claims resulting from such inaccuracy or difference.

County's Review

County will review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise Contractor in writing of County's findings and conclusions.

Power

The Contractor shall provide, at no additional cost to the County, all construction power used at the project site and shall make all arrangements with the electrical utility and with the County for power takeoff points, voltage and phasing requirements, transformers, and metering and shall pay all costs and fees arising therefrom. It shall be the Contractor's responsibility to provide all special connections required for the work.

Water

The Contractor shall provide the water needed for the work, including potable water, construction water, and water for testing purposes.

ARTICLE XII: LABOR, MATERIAL AND PERFORMANCE BONDS

Bonds to be Provided

The Contractor shall furnish two bonds each in the amount of one hundred (100%) percent of the contract price, one as security for the faithful performance of the work, and the other as security for the faithful payment and satisfaction of all persons furnishing materials and performing labor for the project. The bonds shall be issued by a corporation duly and legally licensed to transact surety business in the State of California. The labor and materials bond shall remain in force throughout the period required to complete the work and for 35 days after the recording of the Notice of Completion. The performance bond shall remain in force for a period of 365 days after final acceptance of the work to cover any defects in workmanship, materials, or equipment which develop in that time. The bonds must be executed by a duly licensed surety company and accompanied by a certified copy of the authority to act. The scope of the bonds or the forms thereof shall in no way affect or alter the liabilities of the Contractor to County. Bonds shall be executed on the forms included in the contract documents.

Insolvency or Termination of Right to Do Business

If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in California, Contractor shall within five days thereafter substitute another bond and surety, both of which must be acceptable to County. If an acceptable substitute is not furnished within five days, County may terminate Contractor.

ARTICLE XIII: CONTRACTOR LIABILITY AND INSURANCE

Liability of Contractor

The Contractor shall be liable for all damages and injury which shall be caused to County or any other owners of property on or in the vicinity of the work or which shall occur to any person or persons or property whatsoever arising out of the performance of this contract. Contractor agrees to hold County harmless and indemnify County for any such losses.

Contractor's Liability Insurance

Contractor shall purchase and maintain commercial general liability and other insurance as is appropriate for the work being performed and furnished and as will provide protection from

claims set forth below which may arise out of or result from Contractor's performance and furnishing of the work and Contractor's other obligations under the contract documents, whether it is to be performed or furnished by Contractor, by any subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the work, or by anyone for whose acts any of them may be liable:

1. Claims under workers' disability benefits and other similar employee benefit acts;
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
4. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (b) by any other person for any other reason;
5. Claims for damages, other than to the work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;
6. Claims arising out of operation of laws or regulations for damages because of bodily injury or death of any person or for damage to property; and
7. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

To the extent that Contractor's work, or work under Contractor's direction, may require blasting, explosive conditions, or underground operations, the comprehensive general liability coverage shall contain no exclusion relative to blasting, explosion, collapse of buildings, or damage to underground property.

The insurance required by this paragraph shall be "per occurrence" coverage and shall include the specific coverages and be written for not less than the limits of liability and coverages provided herein, or required by law, whichever is greater. The commercial general liability insurance shall include completed operations insurance. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing or replacing defective work. In addition, Contractor shall maintain such completed operations insurance for at least one year after final payment and furnish County with evidence of continuation of such insurance at final payment. If Contractor's insurance is canceled prior to completion of the project and the Contractor does not furnish a new Certificate of Insurance prior to cancellation, County may obtain the required insurance and deduct the premium from contract moneys due the Contractor.

At the option of Contractor, evidence of coverage and limits may be furnished by an umbrella liability policy certificate in addition to certificates for worker's compensation and employer's liability, and comprehensive automobile and general liability policies.

Contractual Liability Insurance

The commercial general liability insurance required above will include contractual liability insurance applicable to Contractor's obligations hereunder.

Owner's Liability Insurance

Contractor shall purchase and maintain Owner's liability insurance. This insurance shall be issued in the name of County and shall protect and defend County and its agents against all claims arising as a result of the operations of Contractor. The coverage and limits of liability shall be co-extensive with those specified for the Contractor's liability insurance. The Owner's liability insurance may be provided by naming County and its agents as an additional insured on the Contractor's liability insurance.

Property Insurance

Unless otherwise specifically provided, Contractor shall purchase and maintain property insurance (builder's risk) upon the work or equipment and supplies stored at the site to the full insurable value thereof (subject to such deductible amounts as may be agreed upon or required by laws and regulations.) This insurance shall include the interests of County and its agents, Contractor and subcontractors in the work. County shall be listed as an additional insured party. Said policy shall insure against the perils of fire, extended coverage, testing and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided herein, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals).

Amount of Property Insurance

Said insurance shall be on a "per occurrence" basis for the full value of the work and supplies and equipment stored or used in connection with the project and shall include vandalism and malicious mischief endorsement. Special consent of County shall be required prior to use of "claims made" coverage.

Schedule of Required Insurance

1. Worker's Compensation Insurance: Statutory amount and employer's liability of $1,000,000.
2. Contractor's Commercial General Liability Insurance (bodily injury, property damage and including contractual liability insurance, completed operations and products liability insurance): $2,000,000.00.
3. Physical Damage to Owner Owned Property (remodeling or retrofitting project) or Builder's Risk Insurance (new construction project) including but not limited to fire, extended coverage, vandalism, malicious mischief, and optional perils coverage; full value of work to be performed under contract including supplies and equipment stored or used in connection with the project with a maximum deductible of $500.
4. Comprehensive Business or Commercial Automobile Liability Coverage (bodily injury liability, property damage liability, uninsured motorist protection and including non-owned and hired automobile liability): $1,000,000.

Nevada County shall be named as additional insured on all insurance policies. Contractor shall provide proof of insurance required in this contract evidenced by certificates of insurance and endorsements.

Notice Requirement

All the policies of insurance (or the certificates or other evidence thereof) required to be purchased and maintained by the Contractor shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least ten (10) days prior written notice has been given to County by registered mail.

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be fully disclosed by Contractor and approved by County prior to commencement of work. At County's option, the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects County, its officials and employees, or Contractor shall provide a bond guaranteeing payment of losses and related investigations, claims administration and defense expenses.

Risk of Loss

Liability for loss or damage to equipment, materials, workmanship or services occurring on or off the site shall be the responsibility of the Contractor. Liability for completed work shall not be assumed by County until both the work has been completed and County has accepted the work as complete. County will not be responsible for purchasing and maintaining any property insurance to protect the interests of Contractor, subcontractors or others in the work. The risk of loss will be borne by Contractor, subcontractor or others suffering any such loss and if any of them wishes property insurance coverage in addition to insurance required herein, each may purchase and maintain it at the purchaser's own expense.

Waiver of Rights

Contractor waives all rights against County and its agents for all losses and damages caused by any of the perils covered by the policies of insurance provided for above and any other property insurance applicable to the work, and all other parties named as insureds in such policies for losses and damages so caused. Each subcontract between Contractor and a subcontractor will contain similar waiver provisions by the subcontractor in favor of County and its agents and all other parties named as insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by County as trustee or otherwise payable under any policy so issued.

No Right of Recovery

County and Contractor intend that any policies provided as set forth herein shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Any insurance or self-insurance maintained by County shall be in excess of Contractor's insurance and shall not contribute to it.

Receipt and Application of Proceeds

Any insured loss under the policies of insurance required herein will be adjusted with County and made payable to County as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause. County shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged work shall be repaired or replaced, the moneys so received applied on account thereof and the work and the cost thereof covered by an appropriate change order or written amendment.

County's Duties as Trustee

County as trustee shall have power to adjust and settle any loss with the insurers.

Acceptance of Insurance

If County has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor on the basis of its not complying with the contract documents, County shall notify Contractor in writing thereof and Contractor shall immediately provide proof of the proper coverage. Contractor shall provide to County such additional information in respect of insurance provided by it as County may reasonably request. County may at its option waive any type of insurance required herein which County in its discretion deems to be inapplicable to the type of project being constructed. Any such waiver shall be in writing by the County Administrator.

Verification of Coverage

Contractor shall furnish County with certificates of insurance and with original endorsements affecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms provided by County and are to be received and approved by County before work commences.

Subcontractors

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

ARTICLE XIV: DELETED

ARTICLE XV: PLANS AND SPECIFICATIONS

Ownership

All plans and specifications shall remain the property of County and shall be returned to County before the final certificate will be issued.

Handicapped Access

Where applicable, it is the County's intent for all features on the plans and specifications to conform to applicable regulations for the accommodation of physically handicapped persons in buildings and facilities used by the public.

ARTICLE XVI: SHOP DRAWINGS AND SAMPLES

Shop Drawings

After checking and verifying all field measurements and after complying with applicable procedures herein, Contractor shall submit to County for review and acceptance in accordance with the accepted schedule of shop drawing submissions or other appropriate action if so indicated herein, the number of copies specified of all shop drawings, which will bear a stamp or specific written indication that Contractor has satisfied Contractor's responsibilities under the contract documents with respect to the review of the submission. All submissions will be identified as County may require. Such drawings shall be approved by County before any work involving the drawings is performed. The data shown on the shop drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable County to review the information as required.

Contractor's Review

Before submission of each shop drawing or sample, Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each shop drawing or sample with other shop drawings and samples and with the requirements of the work and the contract documents.

Notice of Variation

At the time of each submission, Contractor shall give County specific written notice of each variation that the shop drawings or samples may have from the requirements of the contract documents, and, in addition, shall cause a specific notation to be made on each shop drawing submitted to Engineer for review and acceptance of each such variation.

County's Review

County will review and accept with reasonable promptness shop drawings and samples, but County's review and acceptance will be only for conformance with the design concept of the project and for compliance with the information given in the contract documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the contract documents) or to safety precautions or programs incident thereto. The review and acceptance of a separate item as such will not indicate acceptance of the assembly in which the item functions. Within a reasonable time after receipt of drawings or samples, County will return marked up copies indicating one of the following four actions:

1. If review and checking indicates no exceptions, copies will be returned marked "NO EXCEPTIONS TAKEN" and work may begin immediately on incorporating the material and equipment covered by the submittal into the work.
2. If review and checking indicates limited corrections are required, copies will be returned marked "MAKE CORRECTIONS NOTED" and work may begin immediately on incorporating the material and equipment covered by the submittal into the work.
3. If review and checking indicates insufficient or incorrect data has been submitted, copies will be returned marked "AMEND AND RESUBMIT". No work may begin on incorporating the material and equipment covered by this submittal into the work until the submittal is revised, resubmitted, and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED".
4. If review and checking indicates the material and equipment submittal is unacceptable, copies will be returned marked "REJECTED". No work may begin on incorporating the material and equipment covered by this submittal into the work until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED".

Contractor shall direct specific attention in writing to revisions other than the corrections called for by County on previous submittals. The Contractor may authorize material or equipment supplier to deal directly with County with regard to such submittals; however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the Contractor. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Submittals on various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates checking or review of the group or "package" as a whole.

Contractor's Responsibility for Variation

County's review of shop drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the contract documents unless Contractor has in writing called County's attention to each such variation at the time of submission and County has given written acceptance of each such variation by a specific written notation thereof incorporated in or accompanying the shop drawing or sample review nor will any review by County relieve Contractor from responsibility for errors or omissions in the shop drawings or from responsibility for having complied with the provisions above.

Work Performed Prior to Shop Drawing or Sample Review

Where a shop drawing or sample is required by the specifications, any related work performed prior to County's review of the pertinent submission will be the sole expense and responsibility of Contractor.

ARTICLE XVII: DELETED

ARTICLE XVIII: PERFORMANCE OF THE WORK

Supervision

Contractor shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the contract documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. Contractor shall be responsible to see that the finished work complies accurately with the contract documents.

Superintendence

Contractor shall keep on the work at all times during its progress a competent resident superintendent, acceptable to County, who shall not be replaced without written notice to County except under extraordinary circumstances. The superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor. When work is not in progress and during periods when work is suspended, arrangements acceptable to County shall be made for emergencies. If the superintendent is not present, County shall give direction to the next in command and said direction shall be binding.

Personnel

Contractor shall provide competent, suitably qualified personnel to survey and lay out the work and perform construction as required by the contract documents. Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the work or property at the site or adjacent thereto, and except as otherwise indicated in the contract documents, all work at the site shall be performed during regular working hours, and Contractor will not permit overtime work or the performance of work on Saturday, Sunday or any legal holiday without County's written consent given after prior written notice to County.

Order of Work

If a sequence or procedure is specified in the special provisions or plans for the project, Contractor shall be required to follow the sequence or procedure specified. The price for compliance with a specified sequence or procedure will be considered as part of the bid price and no extra amounts will be allowed therefor.

Safety and Protection

Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. Contractor shall take all reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

1. All employees on the work and other persons and organizations who may be affected thereby;
2. All the work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of underground facilities and utility owners when prosecution of the work may affect them, and shall cooperate with them in the

protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to herein caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, shall be remedied by Contractor. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and County has issued a notice to County and Contractor that the work is acceptable.

The Contractor shall at all times so conduct the work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of County and other governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to fire fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and private and public driveways, and the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

The Contractor shall leave a night emergency telephone number or numbers with the local law enforcement office, so that contact may be made easily at all times in case of trouble or emergencies. The names and telephone numbers of at least two medical doctors practicing in the vicinity and the telephone number of the local ambulance shall be prominently displayed adjacent to all telephones.

Any lighting fixtures shall be installed, mounted and directed in a manner precluding glare to approaching traffic.

Safety Representative

Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to County.

Vehicle Code

Pursuant to the authority contained in Vehicle Code Section 591, County has determined that within such areas as are within the limits of the project and are open to public traffic, the following requirements of the Vehicle Code will apply. The lighting requirements in Section 25803; the brake requirements in Chapter 3, Division 12; the splash apron requirements in Section 27600; and, when operated on completed or existing treated base, surfacing, pavement or structures, except as otherwise provided in Section 7-1.02, "Weight Limitations," the weight limitation requirements contained in Division 15.

Attention is directed to the statement in said Section 591 that this section shall not relieve Contractor or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of its equipment and the protection of the public from injury and damage from such equipment.

Any other requirements set forth in Divisions 11, 12, 13, 14 and 15 of the Vehicle Code which County, pursuant to the authority contained in Vehicle Code Section 591, will require compliance with, will be set forth in the special provisions.

Trench Safety

Attention is directed to the provisions of Section 6705 of the Labor Code of the State of California.

Excavation for any trench 5 feet or more in depth shall not begin until the Contractor has submitted to County the Contractor's detailed plan for worker protection from the hazards of

caving ground during the excavation of such trench. Such plan shall be submitted at least 5 days before the Contractor intends to begin excavation for the trench and shall show the details of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation. The plan shall not use shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Industrial Safety and if such plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and signed by an engineer who is registered as a Civil or Structural Engineer in the State of California.

In addition, the Contractor shall obtain, pay for, and comply with all provisions of the permit required by Section 6500 of the California Occupational Safety and Health Act of 1973.

Notice Prior to Trenching

Where trenching is required, Contractor shall, pursuant to Public Contracts Code Section 7104, promptly, and before the following conditions are disturbed, notify County, in writing of any:

(1) Material that contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
(2) Subsurface or latent physical conditions at the site differing from those indicated.
(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

Upon receipt of such notice, County shall, as required by Public Contracts Code Section 7104, promptly investigate the conditions. If County finds the conditions do materially so differ, or do involve hazardous waste, and would require a decrease or increase in Contractor's cost of, or time required for, performance of any part of the work, County shall issue a change order under the procedures described in this Contract. In the event that a dispute arises between County and Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the cost or time required for performance, Contractor will not be excused from the scheduled completion date but shall proceed with all work to be performed. Contractor shall retain its rights to file a claim as set forth herein.

Alcoholic Beverages

Absolutely no alcoholic beverages shall be permitted on the job site.

Emergencies

In emergencies affecting the safety or protection of persons or the work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from County, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give County prompt written notice as soon as possible thereafter. If County determines that a change in the contract documents is required because of the action taken in response to an emergency, a change order will be issued to document the consequences of the changes or variations.

Environmental and Toxics Warranty

Contractor warrants that no asbestos-containing materials, no PCB-containing fixtures or equipment or other toxic or hazardous materials or equipment other than what is contained in standard building materials were installed on this project without County's express written consent. Contractor further warrants that no asbestos-containing materials, PCB-containing fixtures or equipment or other toxic or hazardous materials were discovered during construction of this project which were not disclosed to County in writing.

Contractor also warrants that its operations during the project were not in violation of any applicable federal, state or local environmental law or regulation dealing with hazardous materials or toxic substances, and no notice from any governmental body has been given to Contractor claiming any such violation or calling attention to the need for any work, repairs, construction, or installation or in connection with the project in order to comply with such laws with which Contractor has not complied. If there are any such notices with which Contractor has complied, Contractor shall provide County with copies thereof.

This warranty shall survive completion of the project, and Contractor shall indemnify County for any breach thereof.

Access to Work

County's representatives, testing agencies and governmental agencies with jurisdictional interests will have access to the work at reasonable times for their observation, inspecting and testing. Contractor shall provide proper and safe conditions for such access.

Adjusting Progress Schedule

Contractor shall submit to County for acceptance adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the general requirements applicable thereto.

Substitute Method of Construction

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the contract documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to County, if Contractor submits sufficient information to allow County to determine that the substitute proposed is equivalent to that indicated or required by the contract documents. The procedure for review by County will be similar to that provided in the paragraph regarding substitution of materials or equipment. No extension of time or extra compensation will be paid to the Contractor by virtue of County's accepting a substitute method of construction.

Suggestions to Contractor

Any plan or method of work suggested by County to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor; and County shall assume no responsibility therefor and in no way be held liable for any defects in the work which may result from or be caused by use of such plan or method of work. Acceptance by the Contractor of any plan or method of work or change suggested by County shall not relieve the Contractor from any other requirements or provisions of the contract.

Permits

Unless otherwise provided for herein, Contractor shall obtain and pay for all construction permits and licenses necessary or incidental to the work. County shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the work, which are applicable at the time of opening of bids. County shall pay all charges of utility connections to the work.

Laws and Regulations

Contractor shall give all notices and comply with all laws and regulations applicable to furnishing and performance of the work. Except where otherwise expressly required by applicable laws and regulations, County shall not be responsible for monitoring Contractor's compliance with any laws or regulations. If Contractor observes that the specifications or drawings are at

variance with any laws or regulations, Contractor shall give County prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated herein. If Contractor performs any work knowing or having reason to know that it is contrary to such laws or regulations, and without such notice to County, Contractor shall bear all costs, damages, fines or penalties, arising therefrom.

Taxes

Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by Contractor in accordance with the laws and regulations of the place of the project which are applicable during the performance of the work.

Use of Premises

Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the project site and land and areas identified in and permitted by the contract documents and other land and areas permitted by laws and regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the work. Should any claim be made against County by any such owner or occupant because of the performance of the work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. Contractor shall, to the fullest extent permitted by laws and regulations, indemnify and hold County harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against County to the extent based on a claim arising out of Contractor's performance of the work.

Fences which cross, abut, or are on easements shall at all times be maintained by the Contractor in a condition which provides the functional purpose of the fence. Temporary fencing of the construction area will be permitted and temporary fencing shall provide the same functional purpose as existing fencing. Unless otherwise indicated, all improvements within easements shall be restored to conditions that existed prior to the start of work.

Before final acceptance of the work the Contractor shall obtain a written statement of release from each property owner that granted an easement for the work. Release statement shall indicate the property owner's acceptance of the site conditions as restored by the Contractor. The County may waive said written releases where a property owner refuses to sign same but only upon making a determination that there is no work to be completed with respect to said property.

Site Clean-Up

During the progress of the work, Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work. At the completion of the work, Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by County. Contractor shall restore to original condition all property not designated for alteration by the contract documents.

The Contractor is advised that the final cleanup of the project shall be done with meticulous care and that the County expects all ductwork, cubicles, cabinets, motor control centers, control panels, rooms, and enclosures to be thoroughly vacuum cleaned and dust-free prior to acceptance of the work.

Protection of Structures

Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the work or adjacent property to stresses or pressures that will endanger it.

Restoration of Structures

The Contractor shall remove such existing structures or monuments as may be necessary for the performance of the work and, if required, shall rebuild the structures or monuments thus removed in as good a condition as found. Contractor shall also repair all existing structures or monuments which may be damaged as a result of the work under this contract.

All curbs, gutters, driveways, sidewalks, and similar structures that are damaged by the installation of the work shall be reconstructed by the Contractor. Reconstruction shall be of the same kind of material with the same finish and in not less than the same dimensions as the original work. All concrete shall be as set forth in the specifications, or as required by County if not so specified. Repairs shall be made by removing and replacing the entire portions between joints or scores and not merely refinishing any damaged part. All work shall match the appearance of the existing improvements as nearly as possible.

All road and streets where the surface is removed, broken or damaged, or in which the ground has caved or settled due to work under this contract, shall be completely resurfaced and brought to the original grade and crown section unless otherwise indicated. Before resurfacing material is placed, edges of pavements shall be trimmed back far enough to provide clean, solid, vertical faces, and shall be free of any loose material. All cultivated areas, lawns, and other surface improvements which are damaged by actions of the Contractor shall be restored as nearly as possible to their original conditions.

Drainage

Existing drainage facilities shall be maintained throughout the contract time to provide the flow capacities available before commencing work. Drainage conduits shall not be broken, removed, or otherwise interfered with, without permission of the responsible agency.

Where construction requires blocking the flow, flows shall be bypassed as necessary. Stream crossings, blockages, and bypassing shall be accomplished in such a manner as to avoid degradation of downstream water quality. Particular attention shall be given to the avoidance of siltation.

Environmental Control

The Contractor shall not pollute the construction site or any drainage course or its tributary inlets with fuels, oils, bitumens, acids, insecticides, herbicides or other harmful materials. The Contractor shall comply with all applicable Federal, State, County and municipal laws concerning pollution of waterways. Contractor shall submit a plan for preventing such occurrences if required by County. Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, from spilling and entering public waters.

Where the Contractor is required to connect or otherwise work around existing lines carrying sewage or process wastes, Contractor shall perform the work to prevent the spill of sewage and insure the delivery of sewage to the treatment plants. Where the Contractor chooses to provide temporary pumping of sewage, Contractor shall first have the pumping facilities approved by County and shall provide 100 percent standby equipment on 24-hour basis.

The Contractor shall provide the means for preventing or lessening all dust nuisances and damages. Such means shall consist of applying water, dust palliative, or both all in accordance with local ordinances and regulations or as directed by County.

Continuing the Work

Contractor shall carry on the work and adhere to the progress schedule during all disputes or disagreements with County. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted specifically herein or as Contractor and County may otherwise agree in writing.

Indemnification

To the fullest extent permitted by laws and regulations, Contractor shall indemnify, defend and hold harmless County and its consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expenses (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (including the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of Contractor, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable. The Contractor's indemnification obligation shall apply whether or not the act giving rise to such claims, damages, losses and expenses is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

Statutory Limitations

In any and all claims against County or any of its consultants, agents or employees by any employee of Contractor, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, the indemnification obligation above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such subcontractor or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.

Related Work at Site

County may perform other work related to the project at the site by County's own forces, have other work performed by utility companies or let other direct contracts therefor which shall contain conditions similar to these. If the fact that such other work is to be performed was not noted in the contract documents, written notice thereof will be given to Contractor prior to starting any such other work; and, if Contractor believes that such performance will involve additional expense to Contractor or requires additional time and the parties are unable to agree as to the extent thereof, Contractor may make a claim therefor as provided for herein. Any difference or conflict arising between the Contractor and any other Contractor employed by County, or between the Contractor and the workers of County with regard to their work, shall be submitted to County and the Contractor shall abide by County's decision in the matter. If the work of the Contractor is delayed because of any facts or omissions of any other Contractor or of County, the Contractor shall on that account have no claim against County other than for an extension of time.

Access to Site

Contractor shall afford each utility company or district and other contractor who is a party to such a direct contract (or County, if County is performing the additional work with County's employees) proper and safe access to the site and a reasonable opportunity for the introduction

and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the work with theirs. Contractor shall do all cutting, fitting and patching of the work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of County and the others whose work will be affected. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility companies or districts and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between County and such utility companies or districts and other contractors.

Acceptance of Work by Others

If any part of Contractor's work depends for proper execution or results upon the work of any such other contractor or utility company or district (or County), Contractor shall inspect and promptly report to County in writing any delays, defects or deficiencies in such work that render it unavailable or unsafe for such proper execution and results. Contractor's failure so to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's work except for latent or nonapparent defects and deficiencies in the other work.

Claims and Disputes

For purposes of this paragraph, "claim" shall be defined as set forth in Public Contracts Code Section 20104(b)(2). Claims shall be presented in writing and include the documents necessary to substantiate the claim. Claims must be filed with the designated County representative no later than thirty (30) days after the occurrence of the event giving rise thereto or denial of the change order, whichever occurs last. The form of said claims shall be the same as is required by Government Code Sections 910 and 910.2.

If the claim is under $50,000, County shall respond in writing to Contractor within 45 days of receipt of Contractor's claim or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the County may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to Public Contract Code Section 20104.2, upon mutual agreement of the County and Contractor. The County's written response to the claim, as further documented, shall be submitted to Contractor within 15 days after receipt of the further documentation or within a period of time no greater than that taken by Contractor in producing the additional information, whichever is greater.

For claims over $50,000 and less than or equal to $375,000, County shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the County may have against Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to Public Contract Code Section 20104.2, upon mutual agreement of County and Contractor. The County's written response to the claim, as further documented, shall be submitted to Contractor within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by Contractor in producing the additional information or requested documentation, whichever is greater.

If Contractor disputes County's written response, or County fails to respond within the time prescribed above, Contractor may so notify County, in writing, either within 15 days of receipt of County's response or within 15 days of County's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer with such County representatives as the County Administrator or the Board of Supervisors directs for settlement of the issues in dispute. Upon such demand, County shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Following the meet and confer conference, if the claim or any portion remains in dispute, Contractor may file a claim with the Board of Supervisors pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. Pursuant to authority granted by Government Code Section 930.2, all claims filed with the Board of Supervisors pursuant to the Government Code shall be filed within 90 days of the denial of the original claim by the County representative. The running of the period of time within which a claim under the Government Code must be filed shall be tolled by any period of time utilized by the meet and confer conference. Any lawsuit which Contractor intends to bring with respect to any claim filed pursuant to the Government Code which claim has been denied by County must be commenced not later than six months after the recording of the notice of completion or not later than six months after the date final payment is deposited in the mail or personally delivered, whichever date comes first. If a civil action is filed, the mediation provisions set forth in Public Contract Code Section 20104.4 shall apply unless waived by mutual stipulation of County and Contractor or unless County elects to resolve the dispute pursuant to Public Contract Code Section 10240 et seq.

For every claim that Contractor makes, it shall provide the following documentation upon request of County as a condition precedent to consideration of the claim: Contractor's bidding calculations forms, cost estimates, time sheets, trend reports, job cost analysis records, labor records, as-built documents, any other records used by Contractor in arriving at its bid price, and any other documents or records kept by Contractor during the course of construction. In the event that claims are made, Contractor agrees that County shall have the right to conduct a complete audit of the books and records of Contractor relating to this project and any books and records relating to overhead, profit or general office expenses charged to this project.

Representative's Decision

Where a representative is appointed, the rendering of a decision by the representative with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment) will be a condition precedent to any exercise by County or Contractor of such rights or remedies as either may otherwise have under the contract documents or by laws or regulations in respect of any such claim, dispute or other matter.

Limitations on Representative's Responsibilities

Neither the County's representative's authority to act nor any decision made by the representative in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the representative or County to Contractor, any subcontractor, any supplier, or any other person or organization performing any of the work, or to any surety for any of them.

Construction Methods and Safety

Notwithstanding any references to laws and regulations, rules, codes or standards in the contract documents, the representative and County will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and the representative and County will not be responsible for Contractor's failure to perform or furnish the work in accordance with the contract documents.

Acts and Omissions of Contractor

Neither the County nor its representatives will be responsible for the acts or omissions of Contractor or of any subcontractor, any supplier, or any other person or organization performing or furnishing any of the work.

ARTICLE XIX: DELETED

ARTICLE XX: DELETED

ARTICLE XXI: DELETED

ARTICLE XXII: PARTIAL COMPLETION

Partial Completion (Completion of a Portion of the Work)

Use by County of any finished part of the work, which has specifically been identified in the contract documents, or which County and Contractor agree constitutes a separately functioning process or facility that can be used by County without significant interference with Contractor's performance of the remainder of the work, may be accomplished prior to completion of all the work subject to the following:

1. County at any time may request Contractor in writing to permit County to use any such part of the work which County believes to be ready for its intended use and substantially complete. If Contractor agrees, Contractor will certify to County that said part of the work is substantially complete and request County to issue a certificate of substantial completion for that part of the work. Contractor at any time may notify County in writing that Contractor considers any such part of the work ready for its intended use and substantially complete and request County to issue a certificate of substantial completion for that part of the work. Within a reasonable time after either such request, County and Contractor shall make an inspection of that part of the work to determine its status of completion. If County does not consider that part of the work to be substantially complete, County will notify Contractor in writing giving the reasons therefor. If County considers that part of the work to be substantially complete, County will deliver to Contractor a written recommendation as to the division of responsibilities pending final payment between County and Contractor for the entire work with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Unless Contractor disagrees in writing and so informs County promptly, County's aforesaid recommendation will be binding on Contractor until final payment for the entire work.

2. County may at any time request Contractor in writing to permit County to take over operation of any such part of the work although it is not substantially complete. A copy of such request will be sent to Contractor and within a reasonable time thereafter County and Contractor shall make an inspection of that part of the work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to County that such part of the work is not ready for separate operation by County, County will finalize the list of items to be completed or corrected and will deliver such list to Contractor together with a written recommendation as to the division of responsibilities pending final payment between County and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the work which will become binding upon County and Contractor at the time when County takes over such operation (unless they shall have otherwise agreed in writing). During such operation and prior to substantial completion of such part of the work, County shall allow Contractor reasonable access to complete or correct items on said list and to complete other related work.

3. No occupancy or separate operation of part of the work will be accomplished prior to the insurers who are then providing the property insurance having acknowledged notice thereof and in writing effecting the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy. Each party shall be responsible for notifying its own insurer.

ARTICLE XXIII: ARBITRATION

Arbitration

Where the total of all claims filed by Contractor are under $375,000, County shall have the option of electing arbitration pursuant to Public Contract Code Sections 10240, et seq. If County does so elect, the mediation provisions of Public Contract Code Section 20104.4 shall not apply pursuant to Public Contract Code Section 20104(a)(2). If County does not elect such arbitration pursuant to Public Contract Code Sections 10240 et seq., the provisions of Public Contract Code Section 20104.4 shall apply.

Where the total of all claims filed by Contractor are above $375,000, the arbitration provisions of this contract are voluntary. Neither County nor Contractor shall be required to enter into mediation or arbitration for amounts above $375,000. Written consent of both parties to mediate or arbitrate such claims shall be a prerequisite to such mediation or arbitration. If the parties agree to arbitrate claims above $375,000, the provisions of Public Contract Code Sections 10240, et seq. shall be utilized.

Time to Request Arbitration

No request for arbitration of any claim, dispute or other matter that is required to be referred to County initially for decision will be made until the earlier of (a) the date on which County has rendered a decision or (b) the tenth day after Contractor has presented its evidence to County if a written decision has not been rendered by County before that date. Unless otherwise required by law, no request for arbitration of any such claim, dispute or other matter will be made later than thirty days after the date on which County has rendered a written decision. Notice of the request for arbitration will be in writing to the other party.

ARTICLE XXIV: LABOR AND EMPLOYMENT

Worker's Compensation Certification

By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract.

Prevailing Wage Rates

In accordance with the provisions of Section 1770 and 1773 of the Labor Code, the County of Nevada has determined that prevailing wage rates are applicable to the work to be done. The Contractor shall post a copy of the wage rates on the job site.

Contractor and all subcontractors must comply with the requirements of Labor Code Section 1771.1(a) pertaining to registration of contractors pursuant to Section 1725.5. Registration and all related requirements of those sections must be maintained throughout the performance of the Contract. The DIR has launched an online application to assist public works contractors in meeting these requirements at https://efiling.dir.ca.gov/PWCR/ActionServlet?action=displayPWCRegistrationForm

The general prevailing wage rates determined by the Director of Industrial Relations, for the county or counties in which the work is to be done, are available from the California Department of Industrial Relations' Internet website at http://www.wdol.gov . These wage rates are not included in the proposal and contract for the project. Changes, if any, to the general prevailing wage rates will be available at the same location.

Pursuant to California Labor Code Section 1775, Contractor shall forfeit Fifty Dollars ($50.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates for such work or craft, and said amounts shall be distributed pursuant to the requirements of said Section 1775. Any employee whose type of work is not covered by any of the classified wage rates shall be paid not less than the rate of wage listed for the classification which most nearly corresponds to the type of work to be performed.

In the case where Federal and State Prevailing Wage Rates conflict, the higher of the two wage rates shall be used.

Collective Bargaining Agreements

Pursuant to California Labor Code Section 1773.8, Contractor shall pay travel and subsistence payments to all workers needed to execute the work as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Section 1773.8 of the Labor Code.

Payroll Records

Contractor shall be responsible for keeping accurate payroll records as required by California Labor Code Section 1776. Contractor is aware that a penalty of twenty-five dollars ($25.00) per day or portion thereof for each worker may be assessed for noncompliance with said section. Contractor shall forward to County a certified copy of each payroll record within ten days after close of each payroll period. Such certification shall include a statement that payroll is correct and complete and complies with prevailing wage requirements.

If by the 15th of the month, the Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the 1st of that month, County will retain an amount equal to 5 percent of the estimated value of the work performed during the month from the next monthly estimate, except that such retention shall not exceed $10,000. Retentions for failure to submit satisfactory payrolls shall be additional to all other retentions provided for in the contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

The Contractor and each subcontractor shall preserve their payroll records for a period of three years from the date of completion of the contract.

Limitations on Hours Worked

Eight hours constitutes a day's work and workers shall be limited to working 8 hours during any one calendar day and 40 hours during any one calendar week. Contractor and all subcontractors shall keep an accurate record of hours worked by each worker for each calendar day and each calendar week which record shall be available for inspection during business hours. Contractor shall, pursuant to California Labor Code Section 1813, forfeit twenty-five dollars ($25) for each day for each worker where such worker is required or permitted to work more than 8 hours in any one day and 40 hours in any one week in violation of the provisions of the Labor Code. No overtime shall be authorized unless prior written approval of County is obtained permitting such overtime. If such overtime work is authorized by County, Contractor shall compensate each worker required to work overtime at the rate of one and one-half (1-1/2) times the basic rate of pay. All costs for overtime inspection, except those occurring as a result of overtime and shift work established as a regular procedure, shall be paid by the Contractor. Overtime inspection shall include inspection required during holidays, Saturdays, Sundays, and any weekday between the hours of 5:00 p.m. and 7:00 a.m. Such costs will include but will not necessarily be limited to engineering, inspection, general supervision and other overhead expenses which are directly chargeable to the overtime work. All such charges shall be deducted by County from payments due the Contractor.

Equal Employment Opportunity and Nondiscrimination

During the performance of this contract, the contractor agrees to abide by all provisions of Section 1735 of the California Labor Code, as amended, regarding nondiscrimination practices.

Employment of Apprentice Labor

Reference is hereby made to Section 1777.5 of the Labor Code of the State of California, which regulations shall govern the employment of apprentices on the work.

Preference for Resident Labor

In the employment of labor for doing the work, the Contractor shall give preference to qualified persons residing within the general area of the work.

Incompetent Workers

If at any time any worker employed by Contractor or any of the subcontractors shall be declared by County to be incompetent or unfaithful in executing the work, the Contractor, on receiving written notice, shall forthwith initiate appropriate action to dismiss such person.

Labor Class Substitutions

If Contractor substitutes a labor classification or provides a new classification which results in a reduction in the contract price, County's execution of a change order evidencing said reduction in price shall in no way be construed, either express or implied, as consent to the use of said labor classification in the performance of any work on the project.

ARTICLE XXV: DELETED

ARTICLE XXVI: CONFLICT OF INTEREST RESTRICTIONS

No official of County who is authorized in such capaCounty and on behalf of County to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspecting, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for County who is authorized in such capaCounty and on behalf of County who is in any legislative, executive, supervisory, or other similar function in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

ARTICLE XXVII: WAIVER OF RIGHTS

No action or lack of action on the part of County at any time to exercise any right or remedy conferred upon it under this contract shall be deemed to be a waiver on the part of County of any of County's rights or remedies.

ARTICLE XXVIII: SUCCESSORS IN INTEREST

County and Contractor each bind themselves, their partners, successors, assigns and legal representatives to the other party hereto, their partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the contract documents.

ARTICLE XXIX: NOTICE

Giving Notice

Whenever any provision of the contract documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent registered or certified mail, postage prepaid, to the last business address known to the giver of the notice. The business addresses of Contractor given in the bid form and Contractor's office at the site of the work are hereby designated as the places to which all notices, letters, and other communication to Contractor will be delivered. However, County or Contractor may change their addresses at any time by an instrument in writing delivered to the other.

Joint Venture Contractor

In the event the Contractor is a joint venture of two or more Contractors, all grants, covenants, provisos and claims, rights, powers, privileges and liabilities of the contract shall be construed and held to be several as well as joint; any notice, order, direction, request or other communication required to be or that may be given by County to the Contractor under this agreement shall be well and sufficiently given to all persons being the Contractor if given to any one or more of such persons; any notice, request or other communication given by any one of such persons to County under this agreement shall be deemed to have been given by and shall bind all persons being the Contractor.

ARTICLE XXX: VENUE AND JURISDICTION

This contract shall be construed in accordance with the laws of the State of California and the parties agree that venue shall be in Nevada County, California.

IN WITNESS WHEREOF, the parties hereto have signed this Agreement on the date first written, above. One counterpart each has been delivered to County, Contractor, and the Sureties. All portions of the contract documents have been signed or identified by County and Contractor.

COUNTY OF NEVADA

ATTEST:

By:_____

_____
Clerk of the Board

Chairman, Board of Supervisors

CONTRACTOR

By:_____
Licensed in accordance with an act providing for the registration of Contractors
License Number:_____
Fed. Tax ID No: _____
Telephone No: _____

Section 10 Definition of Terms

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 Access road. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 Advertisement. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 Airport Improvement Program (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-05 Air operations area (AOA). For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 Airport. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM International (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).

10-08 Award. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 Bidder. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 Building area. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 Calendar day. Every day shown on the calendar.

10-12 Change order. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 Contract. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal, Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 Contract item (pay item). A specific unit of work for which a price is provided in the contract.

10-15 Contract time. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 Contractor. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 Contractor's laboratory. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 Construction Safety and Phasing Plan (CSPP). The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

10-19 Drainage system. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 Engineer. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering observation of the contract work and acting directly or through an authorized representative.

10-21 Equipment. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 Extra work. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-23 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 Federal specifications. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 Force account. Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 Inspector. An authorized representative of the Engineer assigned to make all necessary observations and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-27 Intention of terms. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-28 Laboratory. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as "Engineer's Laboratory" or "quality assurance laboratory."

10-29 Lighting. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 Major and minor contract items. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 Materials. Any substance specified for use in the construction of the contract work.

10-32 Notice to Proceed (NTP). A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 Owner. The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only.

10-34 Passenger Facility Charge (PFC). Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls."

10-35 Pavement. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 Payment bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 Performance bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 Plans. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-39 Project. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 Proposal. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-41 Proposal guaranty. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his or her proposal is accepted by the Owner.

10-42 Runway. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 Specifications. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 Sponsor. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

10-45 Structures. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 Subgrade. The soil that forms the pavement foundation.

10-47 Superintendent. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 Supplemental agreement. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope

of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 Surety. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 Taxiway. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 Work. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 Working day. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Invitation to Bid). See the Advertisement located in the front of these Contract Documents.

20-02 Qualification of bidders. Each bidder shall furnish the Owner satisfactory evidence of his or her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of:

a. statements covering the bidder's past experience on similar work,

b. a list of equipment that would be available for the work, and

c. a list of key personnel that would be available.

d. In addition, each bidder shall furnish the Owner satisfactory evidence of his or her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his or her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that he or she is prequalified with the State Highway Division and is on the current "bidder's list" of the state in which the proposed work is located. Such evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 Contents of proposal forms. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from his or her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit his or her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which they propose to do for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign the proposal correctly and in ink. If the proposal is made by an individual, his or her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his or her authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by fax or email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.

b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection 30-07 titled APPROVAL OF CONTRACT of this section.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and

the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25% limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

Supplemental agreements shall be approved by the FAA and shall include all applicable Federal contract provisions for procurement and contracting required under AIP. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds.

40-03 Omitted items. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain

any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

- **a.** Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,
- **b.** Remove such material from the site, upon written approval of the Engineer; or
- **c.** Use such material for the Contractor's own temporary construction on site; or,
- **d.** Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor

shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property Owner.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Engineer. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his or her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the Engineer will advise the Owner of his or her determination that the affected work be accepted and remain in place. In this event, the Engineer will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on sound engineering judgment and such tests or retests of the affected work as are, in the Engineer's opinion, needed. Changes in the contract price shall be covered by contract change order or supplemental agreement as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the FAA, to use sound engineering judgment in his or her determinations as to acceptance of work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

LIST OF SPECIAL PROVISIONS

Section 200 Special Provisions to the General Provisions-

50-04 Cooperation of Contractor. The Contractor will be supplied with five copies each of the plans and specifications. The Contractor shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the Engineer and his or her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his or her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his or her authorized representative.

50-05 Cooperation between contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 Construction layout and stakes. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): five (5) full size copies of signed and sealed surveys, five (5) copies of the notes as well as pdf copies of both. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

Construction Staking and Layout includes but is not limited to:

a. Clearing and Grubbing perimeter staking
b. Rough Grade slope stakes at 100-foot (30-m) stations
c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station
b. Taxiways – minimum three (3) per station
c. Holding apron areas – minimum three (3) per station
d. Roadways – minimum three (3) per station

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station
b. Taxiways – minimum three (3) per station
c. Holding apron areas – minimum three (3) per station

Pavement areas:

- **a.** Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.
- **b.** Between Lifts at 25-foot (7.5-m) stations for the following section locations:
    a. Runways – each paving lane width
    b. Taxiways – each paving lane width
    c. Holding areas – each paving lane width
- **c.** After finish paving operations at 50-foot (15-m) stations:
    a. All paved areas – Edge of each paving lane prior to next paving lot
- **d.** Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.
- **e.** Fence lines at 100-foot (30-m) stations minimum.
- **f.** Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.
- **g.** Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.
- **h.** Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).
- **i.** Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).
- **j.** The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 Automatically controlled equipment. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 Authority and duties of inspectors. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs incurred by the Owner from any monies due or to become due the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his or her hauling equipment and shall correct such damage at his or her own expense.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.
All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

a. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,

b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection:

EQUIPMENT NAME	CITED FAA SPECIFICATION
None Required	N/A

60-02 Samples, tests, and cited specifications. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All

materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

The Contractor shall employ a testing organization to perform all Contractor required Quality Control tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 Certification of compliance. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, the Contractor shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified

manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.

b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer's field office. An Engineer's field office is not required.

60-06 Storage of materials. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his or her entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his or her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

Utility	Location (Sheet No.)	Person to Contact	Phone No.
AT&T (Telephone)	No telephone line will be disturbed in this project.		
NID (Nevada Irrigation District).	No water structure will be disturbed in this project.		
PG&E (electric)	All electrical work is within airport jurisdiction.		

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or

specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal aid participation. For Airport Improvement Program (AIP) contracts, the United States Government has agreed to reimburse the Owner for some portion of the contract costs. Such reimbursement is made from time to time upon the Owner's request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of Title 49 of the USC and the Rules and Regulations of the FAA that pertain to the work.

As required by the USC, the contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator, and is further subject to those provisions of the rules and regulations that are cited in the contract, plans, or specifications.

No requirement of the USC, the rules and regulations implementing the USC, or this contract shall be construed as making the Federal Government a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-07 Public convenience and safety. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 Barricades, warning signs, and hazard markings. This project does not anticipate the use of barricades, warning signs, and/or hazard markings.

70-09 Use of explosives. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage

shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at his or her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the

contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described in the Construction Safety and Phasing Plan, Appendix A to Section 80.

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall

provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his or her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows:

Utility Service or Facility	Person to Contract	Telephone No.
AT&T (Telephone)	No telephone line will be disturbed in this project.	
NID (Nevada Irrigation District).	No water structure will be disturbed in this project.	
PG&E (electric)	All electrical work is within airport jurisdiction.	

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's

commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens,

chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least 25 percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 Notice to proceed. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 Limitation of operations. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is

in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided. The following AOA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

See Attachment "A" - Construction Safety and Phasing Plan (CSPP) at the end of this section.

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary CSPP measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the CSPP measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner or Engineer.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such

person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as the Owner may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the execution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his or her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

a. CONTRACT TIME based on CALENDAR DAYS shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

   At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

b. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

   If the Contractor finds it impossible for reasons beyond his or her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of his or her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum of two thousand dollars ($2000) will be deducted

from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

The work of this Contract and time charged shall commence on the date stated in the written Notice to Proceed. The Contract Time shall be **60 CALENDAR DAYS** and means that all of the work of the Contract is complete and in operating order.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason above, the Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full

power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his or her responsibilities for the completed work nor shall it relieve his or her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within 60 feet of an active runway at any time.

See Attachment "A"- Construction Safety and Phasing Plan (CSPP) following this section.

END OF SECTION 80

ATTACHMENT "A"

TO

SECTION 80

CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

FOR THE CONSTRUCTION OF

PERIMETER FENCE & GATE SYSTEM UPGRADES, PHASE II

AT

NEVADA COUNTY AIRPORT

FAA AIP NO.: 3-06-0095-TBD
C&S NO.: O95.001.001

MARCH 2017

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CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

1.0 PURPOSE.

Aviation safety is the primary consideration at airports, especially during construction. The Airport Owner's Construction Safety and Phasing Plan (CSPP) and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard.

The CSPP sets forth benchmarks and requirements for the project to help ensure the highest levels of safety, security and efficiency at the airport at the time of construction. Requirements for this CSPP were developed from FAA Advisory Circular (AC) 150/5370-2 *Operational Safety on Airports During Construction*, latest edition.

The CSPP is a standalone document, written to correspond with the safety and security requirements set forth in the AC, the airport safety and security requirements, and local codes and requirements. The CSPP is to be used by all personnel involved in the project. The CSPP covers the actions of not only the construction personnel and equipment, but also the action of inspection personnel and airport staff.

This document has been developed in order to minimize interruptions to airport operations, reduce construction costs, and maximize the performance and safety of construction activity. Strict adherence to the provisions of the CSPP by all personnel assigned to or visiting the construction site is mandatory.

The Contractor shall submit a Safety Plan Compliance Document (SPCD) to the Airport Owner describing how the Contractor will comply with the requirements set forth in this CSPP. The SPCD must be submitted to the Airport Owner prior to issuance of Notice to Proceed.

In the event the Contractor's activities are found in non-compliance with the provisions of the CSPP or the SPCD, the Airport Owner's Representative will direct the Contractor, in writing, to immediately cease those operations in violation. In addition, a safety meeting will be conducted for the purpose of reviewing those provisions in the CSPP/SPCD which were violated. The Contractor will not be allowed to resume any construction operations until conclusion of the safety meeting and all corrective actions have been implemented.

2.0 SCOPE OF PROJECT AND CSPP.

The proposed project generally involves the replacement of approximately 6,100 feet of fence with new 8-foot wildlife fence. It also includes the installation of new pedestrian gates and manual and automatic vehicle gates. Some of these gates will involve electrical work for card reader installations.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the Airport Owner must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities and associated costs will be identified. As they are identified, their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project and/or to airport operations in order to maintain operational safety. This planning effort will ultimately result in a project CSPP. The development of the CSPP takes place through the following five steps:

1. Identify Affected Areas
2. Describe Current Operations
3. Allow for Temporary Changes to Operations
4. Take Required Measures to Revise Operations
5. Manage Safety Risk

3.0 PLAN REQUIREMENTS.

3.1 COORDINATION. The following items shall be coordinated as required:

a. Pre-construction Meeting. A preconstruction meeting will be conducted to discuss operational safety, testing, quality control, quality acceptance, security, safety, labor requirements, environmental factors, and other issues. All parties affected by the construction will be asked to attend including, but not limited to, the Airport Owner, tenants, contractor, subcontractors and Engineer.

At the preconstruction meeting, the Contractor shall submit a plan of operation and schedule of work to the Engineer for approval. The Contractor's plan of operation shall indicate, in detail, the amount of construction planned and the number of shifts and/or overtime operations proposed for the project. The schedule of work shall clearly indicate the sequence of work to be performed. The Contractor shall conform, at all times, to the requirements of these provisions and with current safety practices, rules, regulations and security requirements of Airport Owner. The preconstruction meeting will be held prior to issuance of a Notice to Proceed.

b. Contractor Progress Meetings. A minimum of one progress meeting to discuss scheduling and coordination shall be held each week unless otherwise directed by the Airport Owner, throughout the duration of the Contract, between the Airport Owner, Contractor, Engineer and any other interested parties at a time and place to be designated by the Engineer. These meetings shall include a detailed discussion of construction phasing and safety with regard to the Contractor's compliance with the requirements stipulated in the Contract Documents.

In attendance at these meetings shall be a Contractor's representative with the authority to make decisions concerning the scheduling and coordination of work. Progress meetings shall be facilitated by the Engineer. Operational safety shall be a standing agenda item during progress meetings throughout the construction project.

c. Scope or Schedule Changes. Changes in the Scope of Work or Project Schedule shall be governed by Section 40 and Section 80 of the Contract Documents. Any proposed change that results in a deviation from the established CSPP as expressed by the Contract Documents must be submitted to the FAA and Airport Owner for review and approval. FAA review and approval can be expected to take sixty business days.

d. FAA ATO Coordination. No coordination needed.

e. Pre-Paving Meeting. Not applicable to this project.

f. Payment. The cost of complying with the requirements of this section, including but not limited to scheduling; maintenance of staging areas; providing, placing, relocating, maintaining and removing temporary barricades; protection of aircraft and vehicular traffic cleaning of paved surfaces; restoration of surfaces disturbed as a result of the Contractor's operations; providing, maintaining, and removing warning signs, maintaining, and removing temporary access gates; providing padlocks for access gates; providing a guard at access gates; and all security requirements shall be included under Technical Specification Item M-100, Maintenance and Protection of Traffic.

3.2 PHASING.

a. Phase Elements (Work Area(s))

Work Area Description: The work of the project is the area along the entire perimeter of the airport where existing fence will be removed and new fence will be placed.

b. Construction Safety Requirements (Construction and Operating Requirements)

The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No work is expected on runways or taxiways during this project. No active runway or taxiway shall be crossed, entered, or obstructed at any time. The Contractor shall plan and coordinate his/her work in such a manner as to insure safety and a minimum of hindrance to airport operations. All Contractor equipment and material stockpiles shall be stored at locations determined during construction or as shown on the Construction Safety Drawings (Appendix 1). No equipment will be allowed to park within the approach area of an active runway at any time.

During the work under this Contract, the Airport Owner will make such arrangements to coordinate aircraft movements and Airport operations as necessary to conform to the construction procedures as outlined below and as shown on the Contract Drawings. The Contractor shall give adequate notice to the Engineer, so as to afford time to coordinate construction with the Airport Owner. No work shall proceed in any area without prior approval.

The Contractor shall always confine construction operations to the contractor work area and designated haul routes. Contractor personnel, equipment, stored materials, subcontractors and suppliers will not be allowed on any other area within the Air Operations Area and within the Airport boundaries without prior approval of the Airport Owner or Engineer.

The Engineer will perform a visual site assessment before the Contractor occupies the contractor work area. The Contractor shall be held responsible for all repairs and cleanup costs incurred as a result of the Contractor's construction operations. Restoration shall be the complete return of all work areas to the original conditions.

Temporary cables in grass areas shall be marked with stakes and flagging. Temporary cables in paved areas shall be marked with barricades.

Prior to the start of construction operations, the Contractor shall perform the following:

- Coordinate issuing Notices to Airmen (NOTAM) with the Airport Owner and Engineer for the construction activities involved at least 72 hours in advance of the work.

At the conclusion of construction operations, the Contractor shall perform the following:

- Clean all paved surfaces in accordance with Item M-100, Maintenance and Protection of Traffic.
- Coordinate cancellation of the NOTAMs with the Airport Owner and Engineer.

3.3 AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY.

Contractor, subcontractor, and supplier employees or any other unauthorized persons shall be restricted from entering an active airport operating area without previous permission from the Airport Owner.
In an emergency situation, the Airport Owner or other designated airport representative may order the Contractor to suspend operations; move personnel, equipment, and materials to a safe location; and stand by until aircraft use is completed.

The Contractor shall cooperate with the airport users through the Engineer, in coordination with airport operations, in scheduling the operations to provide adequate clearance for safe aircraft parking, fueling, maintenance, loading or unloading, maneuvering, taxing operations, or other aircraft operations.

a. Identification of Affected Areas

The following is a summary of impacts to the Airport Operations Areas resulting from the proposed construction safety and work phasing requirements:

Table 3.3A Construction Effect on Airport Operations		
Project	Perimeter Fence & Gate System Upgrades, Phase II	
Phase	Work Area(s) . See Section 3.2.a for description)	
Operational Requirements	Normal (Existing)	Anticipated (During Construction)
Scope of Work	Replacement of approximately 6,100 feet of fence with new 8-foot wildlife fence. It also includes the installation of new pedestrian gates and vehicle gates.	
RW 7-25 Average Aircraft Operations	Carrier: 0/day	Carrier: 0/day
	GA: 76/Day	GA: 76/Day
	Military: 0/Day	Military: 0/Day
Taxiway(s) ADG	B-I (Small)	B-I (Small)
ATCT (hours open)	NO TOWER	NO TOWER

Mitigation of effects.

This CSPP has established specific requirements and operational procedures necessary to maintain the safety and efficiency of airport operations during the construction of this project.

All coordination pertaining to airport operations during construction will go through the Airport Owner's Representative and the Airport Operations Manager. Any required NOTAM's to be issued will be sent through the Airport Owner's Representative and issued by Airport Operations.

i. **Temporary Changes to runway and/or taxiway operations:**
None anticipated. Required NOTAM's shall be issued on the various temporary changes to aircraft access through the affected areas.

ii. **Detours for Emergency and other airport vehicles:**
The project work site shall remain open to all emergency vehicles in emergency situations. The Contractor is required to maintain access in and around the project work area for all emergency vehicles. Proper routing of this traffic will be effectively communicated to all supervisory personnel involved in the construction project.

iii. **Maintenance of essential utilities:**
Special attention shall be given to preventing unscheduled interruption of utility services and facilities. Where required due to construction purposes, the Airport Owner and FAA shall locate all of their underground utilities. It is the Contractor's responsibility to have the locations of cabling and other underground utilities marked prior to beginning excavation. Any locations provided by the Airport Owner or FAA are approximate locations and the Contractor shall verify all locations prior to beginning excavations. When an underground cable or utility is damaged due to the Contractor's negligence the Contractor shall immediately repair the affected cable or utility at his/her own expense. Full coordination between airport staff, field inspectors, and construction personnel will be exercised to ensure that all airport power and control cables are fully protected prior to any excavation.

iv. **Temporary Changes to air traffic control procedures:**

None expected. No deviation to the original CSPP shall be made without final FAA approval.

3.4 PROTECTION OF NAVIGATIONAL AIDS (NAVAIDS).

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordination with the appropriate FAA ATO to evaluate the effects of construction activity and the required distances and direction from the NAVAID is required. Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs are not anticipated in this project.

3.5 CONTRACTOR ACCESS.

This section of the CSPP details the areas to which the Contractor must have access, and how Contractor personnel will access those project work areas.

a. Location of stockpiled construction materials.

The Contractor shall store material and equipment and schedule his operations for work to be done so that no unauthorized interference to normal Airport operations will result there from. Construction operations shall not be conducted in a manner to cause interference with Airport Operations. Stockpiled materials and equipment storage are not permitted within the Runway Safety Area/ Taxiway Safety Area (RSA/TSA), Obstacle Free Zone (OFZ) or Object Free Area (OFA) of an operational runway or taxiway. Stockpiled construction materials must be located inside the contractor staging area as shown on the Construction Safety Drawings (Appendix 1) unless otherwise approved by the Engineer.

Stockpiled material shall be constrained in a manner to prevent movement resulting from either aircraft jet blast or wind conditions in excess of ten miles per hour. In addition, stockpiled material shall have silt fence located around the material to prevent Foreign Object Debris (FOD) from moving onto the airfield pavements or polluting watercourses.

Open trenches exceeding 3 inches in depth and 5 inches in width or stockpiled material are not permitted within the limits of safety areas of operational runways or taxiways. Stockpiled material shall not be permitted within the protected areas of the runways, or allowed to penetrate into any of the protected airspace.

Spoil and Disposal Areas: Some vegetation spoil shall be disposed of on-site in accordance with the Airport Owner's direction unless otherwise shown or specified. All on-site vegetation spoils shall be reviewed and approved by the airport owner prior to finalizing the disposal. Any spoils not approved by the airport owner shall be disposed of offsite by the contractor. The location of where the on-site vegetation spoil may be placed is shown on the Construction Safety Drawings (Appendix 1). Construction resulting with vegetation spoil in the vicinity of the locations shown in the Construction Safety Drawings may be disposed of onsite. Any other vegetation spoil shall be disposed of offsite unless otherwise directed by the Airport Owner. Any non-vegetation spoil shall be disposed of offsite by the Contractor unless otherwise shown or specified. The Contractor shall submit the "Spoils Deposition Release Form" for any spoils which are transported from the project site. A copy of the form can be found in Appendix 4. No direct payment will be made for spoiling and disposal operations. The cost of spoiling material on-site, or of spoiling material off-site, shall be considered incidental to this Contract and the costs shall be included in the various pay items involved.

b. Vehicle and pedestrian operations. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the Air Operations Area (AOA).

The Airport Owner will coordinate requirements for vehicle operations with the affected airport tenants. Specific vehicle and pedestrian requirements for this project are as follows:

All construction vehicles and personnel shall be restricted to the immediate work areas specified by the contract for this project. These areas include the haul routes into the work area, the designated contractor staging area and the area under construction. Use of alternate haul routes or staging areas by the contractor shall not be permitted without prior notification and approval by the Airport Owner's Representative.

i. Construction Site Parking:

The Contractor's personal vehicle parking area shall be in the contractor staging area, as shown on the Construction Safety Drawings (Appendix 1). Contractor personal vehicles will not be allowed inside the airport fence Air Operations Area (AOA) or secured area.

A staging area, as indicated on the Contract Drawings, will be provided where the Contractor may set up a field office and store equipment and materials. The Contractor shall make his own arrangements for, and bear all costs of required utilities. The Contractor shall use and maintain the site in accordance with requirements of the Airport Owner. Upon completion of work, the Contractor's staging area shall be removed and the area cleaned and restored to original or better condition.

ii. Construction Equipment Parking:

The Contractor's equipment storage area shall be in the contractor staging area as shown on the Construction Safety Drawings (Appendix 1). The Contractor's equipment and construction vehicles shall be restricted to the construction site or storage areas during construction and parked in the equipment storage area during non-working periods. Maximum allowable equipment height in the staging area shall be 20 feet. Maximum allowable equipment height in the work areas shall be 20 feet.

Contractor must service all construction vehicles within the limits of the project work area or the Contractor's Staging Area. Parked construction vehicles must be outside the OFA and never in the safety area of an active runway or taxiway. Inactive equipment must not be parked on closed taxiways or runways. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees shall also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct any runway visual aids, signs, or navigation aids.

iii. Access and Haul Roads:

The Contractor shall clear, construct and maintain haul routes as required for the prosecution the work. The haul routes and access points shall only be in the locations approved by the Engineer and the Airport Owner or as shown on the Construction Safety Drawings (Appendix 1).

Access or haul routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Construction traffic must remain on the designated haul routes, never straying from the approved paths. Haul and access routes shall be clearly delineated with temporary marking and signage by the Contractor. Signage and marking placement shall be reviewed and approved by the Engineer and Owner prior to being put into service. The Contractor shall fully describe the appropriate access routes to all his/her employees, subcontractors and material delivery personnel.

The Contractor shall be responsible for maintaining existing haul routes. At the completion of the project, these areas shall be returned to their original lines and grades and shall be restored to a condition equal to or better than original. All non-paved areas that are disturbed by Contractor's haul roads, staging area, etc., located outside of the seeding limits shown on the plans shall be re-seeded and restored to their original or better condition by the Contractor at no additional cost to the Airport Owner.

The Contractor shall coordinate haul routes, closures and schedules with other projects which may be underway during the same time period as this contract.

The Contractor shall control and coordinate the material (supplies) that are hauled to and from work area. Delivery of equipment and materials to the area of work shall be by way of the access route shown on the Construction Safety Drawings (Appendix 1) or designated by the Airport Owner or Engineer.

The Contractor shall maintain all haul routes and work areas in a dust free condition at all times. The Contractor shall control dust from the construction operations by vacuum type sweeping, watering or other methods as approved by the Engineer. Contractor shall have equipment (in operating condition) on-site, at all times, to control dust. If the Contractor fails to comply with this requirement, construction will be suspended until a plan for controlling the dust is approved by the Engineer. Landside haul routes, boulevards and drives shall be kept clean by use of a vacuum sweeper on a daily basis as required. Application of water on dirt or gravel haul routes must be provided as often as necessary. Haul roads in any airport traffic areas must be especially monitored for dust and debris to prevent any potential Foreign Object Debris (FOD) situations.

The existing perimeter road shall remain open and accessible for airport personnel at all times. Special attention must be given to ensure that if construction traffic is to share or cross any routes that emergency vehicles right of way is not impeded at any time, and that construction traffic on haul roads do not interfere with NAVAIDs or approach surfaces of operational runways.

iv. Marking and Lighting of Vehicles:

When any vehicle or piece of equipment, other than one that has prior approval from the Airport Owner, must operate on an airport, it shall be escorted and properly identified.

The Contractor shall limit access within the airport security fence to authorized vehicles. All authorized vehicles shall have a vehicle dash board placard permit issued by the Airport Owner or an identification sign on both sides of the vehicle containing the Contractor's company name. Private vehicles of the Contractor's personnel must be parked outside the airport security fence and will not be allowed within the airport security fence at any time.

All vehicles operating on the airport and in the general vicinity of the safety area or in aircraft movement areas must be marked with flashing yellow/amber beacons or orange and white flags during daylight hours. During hours of darkness or low visibility they shall be marked with at least flashing yellow/amber beacons.

Beacons and flags must be maintained to standards and in good working and operational condition. Beacons must be located on the uppermost part of the vehicle structure, visible from any direction, and flash 75 +/- 15 flashes per minute. Flags shall be 3' by 3' with alternating 1' by 1' international orange and white squares, and shall be replaced by the contractor if they become faded, discolored, or ragged as determined by Airport Operations or the Airport Owner's Representative.

v. Description of Proper Vehicle Operations:

The Contractor shall be required to follow guidance on the additional identification and control of construction equipment per the Airport's Security Plan. No Contractor's vehicle or pedestrian crossing of active runways or taxiways will be allowed at any time during the work of this Contract, unless otherwise specified. No deviation from the pedestrian and vehicle routes to and from the Project Areas will be allowed unless specific permission has been granted by the Airport Owner.

The ground movement of aircraft shall have the right-of-way at all times, and the Contractor's vehicles and equipment shall yield to aircraft at all times.

vi. **Required Escorts:**

At no time shall active taxiways or taxilanes be crossed by construction equipment without notification and proper approval/clearance from radio-trained gate guards or Airport Operations. Only Airport Personnel and Contractor employees trained by the Airport can serve as escorts for crossing runway, taxiways, or taxilanes.

vii. **Training Requirements for Vehicle Drivers:**

Any employees the Contractor would request to be given permission by Airport Operations to drive on the AOA shall complete airport driver training per the Airport's requirements. Airport Personnel will train drivers to be escorts to others.

viii. **Situational Awareness:**

Aircraft traffic will continue to use existing runways, aprons, and taxiways of the Airport during the time that work under a contract is being performed. The Contractor shall, at all time, conduct the work as to create no hindrance, hazard, or obstacle to aircraft using the Airport.

Vehicle drivers must confirm by personnel observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

ix. **Two-way Radio Communication Procedures:**

Two-way radio communications are required between Contractors and Airport Personnel [Airport Aeronautical Advisory Stations (UNICOM/CTAF)].Vehicular traffic located in or crossing an active movement area shall have a working two-way radio (UNICOM).

The Contractor shall comply with proper radio usage, including read back requirements and proper phraseology including the International Phonetic Alphabet.

x. **Maintenance of the Secured Area of the Airport.**

Airport Owner and Contractor must also maintain a high level of security during construction when access points are created in the security fencing to permit construction vehicle access. Temporary gates shall be equipped and/or manned by construction personnel to prevent unauthorized access by vehicles, animals or people. Procedures conforming to Airport security protocols should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. Access shall be made available at all times to all airport emergency vehicles traveling to operations areas within the proximity of the construction work zone.

c. **Security.**

The Contractor shall be responsible for maintaining security at all access gates used during the project and will be held liable by the Airport Owner for any breach of security. No gate shall be left open. The Contractor shall be required to post a guard at the gate to open and close the gate for personnel and equipment. No gate shall be left open. Guard shall be responsible for ensuring that no unauthorized persons or vehicles enter the secure area. Airport Owner and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage

of construction vehicles or personnel. See Vehicle and Pedestrian Operations, letter x for procedures conforming to Airport Security protocols.

The Contractor shall be required to maintain security and comply with the Transportation Security Administration Security Rules and Regulations throughout the duration of the project. The Contractor and the Surety shall indemnify and save harmless the Airport Owner, Engineer and third party or political subdivision from any and all breaches of security and shall indemnify the Airport Owner for any fines, expenses and damages which it may be obliged to pay by reason of any breach of security resulting from the Contractor's actions at any time during the prosecution of the work.

3.6 WILDLIFE MANAGEMENT.

Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports.

a. **Trash.** Food scraps from construction personnel activity must be collected and disposed of at a proper facility.

b. **Standing water.** Water shall not be allowed to collect and pool for more than any single 24-hour period. Temporary grading may be required to promote drainage during daily operations as well as between work phases.

c. **Tall grass and seeds.** The use of millet seed in turfing and seeding operations shall not be permitted.

d. **Poorly maintained fencing and gates.** The Contractor shall maintain a constant secure perimeter to the airfield, including continuous security perimeter fencing and gates.

e. **Disruption of existing wildlife habitat.** Not applicable to this project.

Contractor shall take immediate remedial action to remove wildlife attractants should any occurrence be noted. Contractor shall immediately report to the Engineer and Airport Owner should any wildlife congregation be noted, and in particular if mammals enter the airport through the construction gate.

3.7 FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT.

Special care and measures shall be taken to prevent Foreign Object Debris (FOD) damage when working in an airport environment. Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. The Contractor shall be responsible for implementing an approved FOD Management Plan prior to the start of construction activities. The FOD Management Plan will have procedures for prevention, regular cleanup, and containment of construction material and debris. The Contractor will ensure all vehicles related to the construction project using paved surfaces in the AOA shall be free of any debris that could create a FOD hazard. Special attention will be given to the cleaning of cracks and pavement joints. All taxiways, aprons, and runways must remain clean. Waste containers with attached lids shall be required on construction sites.

Special attention should be given to securing lightweight construction material (concrete insulating blankets, tarps, insulation, etc.). Specific securing procedures and/or chainlink enclosures may be required.

Contractors will provide their own equipment for vehicle and equipment washing and clean up.

Immediate access to a power sweeper is required when construction occurs on any pavement area inside the AOA, unless an appropriate alternative has been approved by the Airport Owner's Representative and Airport Operations Manager.

3.8 HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT.

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel, hydraulic fluid, or other chemical fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. To that end, the Contractor is required to develop a spill prevention plan and response procedures for vehicle operations prior to the start of construction activities. This includes maintenance of appropriate SDS data and appropriate prevention and response equipment on-site.

Fueling Procedures and Spill Recovery Procedures shall be in accordance with Fire Code, latest edition, and the National Fire Protection Association standard procedures for spill response, latest edition. If fueling is to take place in the staging area, it must be away from catch basins. Contractor must have spill containment kits on-site.

In the event of a fuel spill or the spill of other hazardous materials, the Contractor shall immediately notify the Airport Owner and the Engineer, the Environmental Protection Agency, and the California Regional Water Quality Board.

Contractor shall abide by the specific requirements contained in the Technical Specifications of this contract.

3.9 NOTIFICATION OF CONSTRUCTION ACTIVITY.

The following is information and procedures for immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport.

a. **Maintenance of a list of Responsible Representatives/ Point of contact.** A list of responsible representatives and points of contact shall be created by the Engineer, the Airport and the Contractor prior to the start of construction. This list shall be compiled as part of the project pre-construction meeting agenda. Procedures will be established to contact all parties, including after regular work hours. Updates will be made to the list throughout the project duration by the Engineer. Contractor points of contact shall be incorporated into the contractor's SPCD.

b. **Notices to Airman (NOTAM).** Only the Airport Owner may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway or taxiway. The Airport Owner must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The Airport Owner must file and maintain a list of authorized representatives with the FSS. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the Airport Owner. See Section 3.17 regarding issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

   Any NOTAMs for planned airfield closures for this project must be coordinated through the Airport Owner's Representative and the airports duly appointed construction management representative. Reference Section 3.2 for planned closures for this project, which require issuance of a NOTAM.

c. **Emergency Notification Procedures.** In the event of an aircraft emergency, severe weather conditions, or any issue as determined by the Airport that may affect aircraft operations, the Contractor's personnel and/or equipment may be required to immediately vacate the area(s) affected. Points of contact for the various parties involved with the project shall be identified and shared at the pre-construction meeting among the various parties. Emergency points of contact shall be incorporated into the Contractor's SPCD.

d. **Accidents**. The Contractor shall provide at the site such equipment and medical facilities as are necessary to supply first aid service to anyone who may be injured in connection with the work. The Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance for the work, whether on or adjacent to the site which caused death, personal injury or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Airport Owner.

If any claim is made by anyone against the Contractor or any Subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer giving full details of the claims.

e. **Coordination with Emergency Personnel.** The Contractor shall coordinate, through the duly appointed Airport Owner's Representative, with emergency personnel, mutual aid providers and other emergency services if construction requires the following:

- The deactivation and subsequent reactivation of water lines or fire hydrants, or
- The re-routing, blocking and restoration of emergency access routes, or
- The use of hazardous materials on the airfield.

Procedures and methods for addressing any planned or emergency response actions on the airfield concerning this project shall be established and implemented prior to the start of construction.

f. **Notification to the FAA.**

i. **Part 77.** Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e. cranes, graders, other equipment) on airports. FAA Form 7460-1, Notice of Proposed Construction or Alteration, is used for this purpose and submitted to the appropriated FAA Airports Regional or District Office. A 7460-1 form for this project has been completed and submitted by the Engineer for using equipment with a maximum height of 20 feet. A new 7460-1 form must be submitted to the FAA for review and comment for any equipment which the Contractor will use which is taller than the equipment used in the above 7460-1 submission. The Engineer will be responsible for submitting the new 7460-1 form to the FAA. To that end, the Contractor shall identify the equipment in his SPCD, including the maximum height it will extended to during construction, the area(s) in which the equipment will be used, and the duration the equipment will be used

ii. **Part 157.** It is not anticipated that Part 157 notifications will be required for this project

iii. **NAVAIDS.** For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

3.10 INSPECTION REQUIREMENTS.

a. Daily (or more frequent) inspections. Inspections shall be conducted by the Contractor at least daily, but more frequently if necessary, to ensure conformance with the CSPP. A sample checklist is provided in

Appendix 2 of this document. Promptly take all actions necessary to prevent or remedy any unsafe or potentially unsafe conditions as soon as they are discovered.

b. Final inspections. A final inspection with the Airport Owner's Representative, Engineer and Contractor will take place prior to allowing airport operations.

3.11 UNDERGROUND UTILITIES.

Special attention shall be given to preventing unscheduled interruption of utility services and facilities. Where required due to construction purposes, the FAA shall locate all of their underground cables. The Contractor shall locate and/or arrange for the location of all the underground cables. When an underground cable is damaged due to the Contractor's negligence, the Contractor shall immediately repair the cable affected at his/her own expense. Full coordination between airport staff, field inspectors, and construction personnel will be exercised to ensure that all airport power and control cables are fully protected prior to any excavation.

Prior to opening an excavation, effort shall be made to determine whether underground installation: i.e., sewer, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the approximate locations of such an installation, the exact locations shall be determined by careful hand probing or hand digging, and/or use of a vacuum truck, and when it is uncovered, adequate protection shall be provided for the existing installation. All known owners of underground facilities in the area concerned shall be advised of proposed work at least 48 hours prior to the start of actual excavation.

The information concerning underground utilities was compiled from information and sketches furnished by or obtained from utility companies and the Airport. The Airport Owner and the Engineer do not guarantee their accuracy. The Contractor is advised to determine the exact locations from the available sources of information or provide his own means of detection. The only case in which the Engineer will consider redesign or relocation of a proposed facility in the project is when an existing utility is located within the construction limits. In this case, the Engineer will work with the Airport Owner to determine the appropriate action to resolve the conflict. If such relocation is impossible, the Engineer will consider re-design or relocation of the proposed facilities. In both cases, Contractor shall be responsible for all underground utilities and shall not be separately compensated for delays or extra cost.

Note that 811 USA dig alert services do not include locating FAA and Airport Owner facilities.

3.12 PENALTIES.

Failure on the part of the Contractor to adhere to prescribed requirements may have consequences that jeopardize the health, safety or lives of customers and employees at the airport. The Airport Owner may issue warnings on the first offense based upon the circumstances of the incident. Individuals involved in non-compliance violations may be required to surrender their Airport ID badges and/or be prohibited from working at the airport, pending an investigation of the matter.

Penalties for violations related to airport safety and security procedures will be established by the Airport Owner.

Note: project shutdown or misdemeanor citations may be issued on a first offense. When construction operations are suspended, activity shall not resume until all deficiencies are rectified.

3.13 SPECIAL CONDITIONS.

In the event of an aircraft emergency, the Contractor's personnel and/or equipment may be required to immediately vacate the area. The Contractor will receive notification from airport operations when special conditions require the construction site to be vacated. In any event, extreme care should be exercised should construction personnel identify any emergency or rescue vehicle moving toward the runway with emergency lights displayed. This will generally mean that an emergency situation is imminent.

Special conditions that could require suspension of the construction work include the following: aircraft in distress, aircraft accident, security breach, VIP operation, vehicle/pedestrian deviation, severe weather, or failing to abide by this Construction Safety and Phasing Plan and/or the Safety Plan Compliance Document.

3.14 RUNWAY AND TAXIWAY VISUAL AIDS.

This topic includes marking, lighting, signs, and visual NAVAIDs. Those areas where aircraft will be operating shall be clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, the Contractor shall inspect and verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs and visual NAVAIDs remain in place and operational.

a. **General.** Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials that would minimize damage to an aircraft in the event of inadvertent contact.

- Marking and lighting for a temporary threshold is not required.
- Closed runway markings are not required.

b. **Markings.** No markings work anticipated.

c. **Lighting and visual NAVAIDs.** No lighting or visual NAVAIDs work anticipated.

d. **Signs.** No runway or taxiway signs work anticipated.

e. **Maintenance of Airport Lighting.** Airport lighting work not anticipated in this project.

3.15 MARKING AND SIGNS FOR ACCESS ROUTES.

Location of haul routes on the airport site shall be as specified in the project drawing set and as provided graphically in the attached exhibits, reference Appendix 1. It shall be the Contractor's responsibility to coordinate off-site haul routes with the appropriate owner who has jurisdiction over the affected route. The haul routes, to the extent possible, shall be marked and signed in accordance with FAA airfield signage requirements, the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or state highway specifications, as applicable.

3.16 HAZARD MARKING AND LIGHTING.

a. **Purpose.** Hazard marking and lighting prevents pilots from entering areas closed to aircraft, and prevents construction personnel from entering areas open to aircraft. To that end, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles shall be installed and maintained by the Contractor for the duration of construction operations.

b. **Equipment.** The Contractor shall have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades (if used). The Contractor must file the contact person's information

with the Airport Owner. Lighting should be checked for proper operation at least once per day, preferably at dusk.

3.17 PROTECTION OF AIRFIELD AREAS.

Safety area encroachments, improper ground vehicle operations and unmarked or uncovered holes and trenches in the vicinity of aircraft operation surfaces and construction areas are the three most recurring threats to safety during construction. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces shall be a standing requirement for the duration of construction operations.

a. **Runway Safety Area (RSA).** A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway by aircraft.

Runway	Aircraft Design Group	RSA Distance from Centerline		RSA Width	RSA Length from End of Runway
		RSA	Holdline		
7-25	B-I (Small)	60 ft.	125 ft.	120 ft.	240 ft.

No construction may occur within the existing RSA while the runway is open. Any construction between RSA and Holdline must be approved with Airport Operations prior to starting work.

The Airport Owner must coordinate any adjustment of RSA dimensions, to meet the above requirement, with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

Open trenches or excavations are not permitted within the RSA while the runway is open. The Contractor must backfill trenches before the runway is opened. Coverings are not allowed in runway safety areas. There shall be no stockpiled materials or equipment stored within the limits of the RSA.

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, emergency personnel equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

b. **Runway Object Free Area (ROFA).** Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

Runway	Aircraft Design Group	ROFA Distance from Centerline	ROFA Width	ROFA Length from End of Runway
7-25	B-I (Small)	125 ft.	250 ft.	240 ft.

c. **Taxiway Safety Area (TSA).** The taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. No construction may occur within the TSA while the taxiway is open for aircraft operations.

Taxiway	Aircraft Design Group	TSA Distance from Centerline	TSA Width
All	B-I (Small)	24.5 ft.	49 ft.

Open trenches or excavations are not permitted within the TSA while the taxiway is open. The Contractor must backfill trenches before the taxiway is opened. Coverings are not allowed in taxiway safety areas.

The Airport Owner must coordinate any adjustment of TSA dimensions, to meet the above requirement, with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

After the taxiway has been closed, Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the Airport Owner, and light them with red lights during hours of restricted visibility or darkness.

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, emergency personnel equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

d. **Taxiway Object Free Area (TOFA).** Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway/taxilane object free area during normal operations. Thus the restrictions are more stringent. No construction equipment may be parked within the TOFA while the taxiway/taxilane is open for aircraft operations.

Construction activity may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

(i) Appropriate NOTAMs are issued.

(ii) Marking and lighting meeting the provisions above are implemented.

(iii) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). In these situations, flaggers must be used to direct construction equipment, and wing walkers will be necessary to guide aircraft. Wing walkers should be airline/aviation personnel rather than construction workers. If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

Taxiway	Aircraft Design Group	TOFA Distance from Centerline	TOFA Width
All	B-I (Small)	44.5 ft.	89 ft.

Taxilane	Aircraft Design Group	TLOFA Distance from Centerline	TLOFA Width
All	B-I (Small)	39.5 ft.	79 ft.

e. **Obstacle Free Zone (OFZ).** Construction personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. The OFZ is a defined volume of airspace centered about and above the runway centerline.

f. **Runway approach/departure surfaces.** All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the Airport Owner with the appropriate FSS, ATO/Technical Operations (for affected NAVAIDS) and airport users.

Runway	Aircraft Approach Category	Airplane Design Group	Minimum Safety Area Behind Threshold	Minimum Unobstructed Approach Slope
7-25	B	B-I (Small)	240 ft.	20:1

3.18 OTHER LIMITATIONS ON CONSTRUCTION.

a. Prohibitions. The following prohibitions are in effect for the duration of this project:

1. No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.
2. No use of open flame welding or torches unless fire safety precautions are provided and the Airport Owner has approved their use.
3. No use of electrical blasting caps or explosives of any kind on or within 1,000 ft (300 m) of the airport property.
4. No use of flare pots within the AOA.

b. Restrictions.

i. Construction suspension required during specific airport operations – Not Applicable
ii. Areas that cannot be worked on simultaneously – Not Applicable
iii. Day or night construction restrictions – Night work not permitted.
iv. Seasonal Construction Restrictions – Not Applicable

APPENDIX 1

LOCATION MAP
(Sheet G-001of the Contract Drawings)

GENERAL PLAN
(Sheet G-101 of the Contract Drawings)

CONSTRUCTION SAFETY PHASING DRAWINGS
(Sheets GC 102 & GC 103 of the Contract Drawings)

APPENDIX 2

CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

Construction Project Daily Safety Inspection Checklist

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety Area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovers holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the contractor may use to aid in identifying and correcting potentially hazardous conditions.

Potentially Hazardous Conditions

Item	Action Required	or	None
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.			☐
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.			☐
Runway resurfacing projects resulting in lips exceeding 3 in (7.6 cm) from pavement edges and ends.			☐
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.			☐
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.			☐
Tall and especially relatively low visibility units (that is, equipment with slim profiles) –cranes, drills, and similar objects—located in critical areas, such as OFZ and approach zones.			☐
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on an apron, open taxiway, or open taxi lane or in related safety, approach, or departure area.			☐
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.			☐

Item	Action Required	or	None
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.			☐
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.			☐
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.			
Obliterated or faded temporary markings on active operational areas.			☐
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.			☐
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.			☐
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.			☐
Restrictions on emergency access from fire stations to the runway / taxiway system or airport buildings.			
Lack of radio communications with construction vehicles in airport movement areas.			☐
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.			☐

Item	Action Required	or	None
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.			☐
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.			☐
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).			
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.			☐
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.			☐
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.			☐
Site burning, which can cause possible obscuration.			☐
Construction work taking place outside of designated work areas and out of phase.			☐

APPENDIX 3

CONTRACTORS SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

(The SPCD Certification is located in the Proposal Section)

SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

Project Location: Nevada County Airport, Grass Valley, California

Project Name: Perimeter Fence and Gate System Upgrades, Phase II

General Statement:

The Construction Safety and Phasing Plan (CSPP), identified as Attachment "A" to Section 80, has been prepared in accordance with FAA Advisory Circular 150/5370-2F, *Operational Safety on Airports During Construction and the requirements of the Airport Owner*. The CSPP has been submitted to the FAA for review and comment. Any comments from the FAA which were received prior to bid opening have been incorporated into the CSPP.

In the event that the FAA transmits comments which require that the CSPP be revised after bid opening, I understand that I am obligated to abide by the conditions and statements contained in the revised CSPP. I further understand that I will be given the opportunity to evaluate the revised CSPP as it relates to my contract and request appropriate compensation in accordance with the provisions of the contract.

Supplemental Information:

Where the CSPP covers a subject and no additional information is needed, the statement below reads, "No supplemental information required". Where additional information is required by the Contractor, the information shall be provided in the spaces below.

The section numbers below correspond with the section numbers in the CSPP.

3.1 Coordination

Statement: [Explain how you will distribute information and details of meetings to employees and subcontractors.]

_____
_____
_____
_____

3.2 Phasing

Statement: [List the number of days each Work Area will take. State the time day work will start and finish for each work area.]

_____
_____
_____
_____

3.3 Areas and operations affected by the construction activity

Statement: Information is provided in the CSPP. No supplemental information is required.

3.4 Protection of NAVAIDs

Statement: Information is provided in the CSPP. No supplemental information is required.

3.5 Contractor Access

Security Statement: [Explain how you will maintain integrity of the airport security fence at the access gate, e.g.: Gate guards, closed and locked gates, temporary fencing, etc.]

Training Statement: [List individuals who will receive driver training (for certificated airports and as requested.]

Communication Statement: [Identify types of radios, if any, you will use to communicate with drivers and personnel. Identify who will be monitoring radios. Identify a contact person and phone number if Airport Personnel cannot reach the contractor's designated person by radio.]

Escort Statement: [Identify who will escort material delivery vehicles.]

3.6 Wildlife Management

Statement: [Identify who will be monitoring wildlife in the construction area. Identify who will be monitoring wildlife at the construction gate.]

3.7 Foreign Object Debris (FOD) Management

Statement: [Identify who will be preparing a FOD Management Plan. (Plan must be approved prior to the start of construction activities.)]

3.8 Hazardous material (HAZMAT) management

Statement: [Identify who will be preparing a Spill Prevention Plan. (Plan must be approved prior to the start of construction activities.)]

3.9 Notification of construction activities. Provide the following:

Key Personnel Statement: [Identify your key personnel points of contact with phone numbers.]

Emergency Contacts Statement: [Identify your emergency contacts with 24 hour phone numbers.]

Equipment Statement: [Part 77: Identify equipment you will be using that is taller than 20 feet, including on-site batch plants. Identify the maximum height it will be extended to during construction for each Work Area and the expected duration. Identify when during the day it will be used.]

3.10 Inspection requirements.

Statement: [Identify the person who will be responsible for daily inspections to ensure conformance with the CSPP. Describe additional inspections you will employ, if any, to ensure conformance.]

3.11 Underground utilities.

Statement: [Discuss proposed methods of identifying and protecting underground utilities.]

3.12 Penalties

Statement: Information is provided in the CSPP. No supplemental information is required.

3.13 Special conditions.

Statement: [Identify who will be responsible for moving equipment and personnel from the work area and vacating the area in the event of a special condition listed in the CSPP.]

_____

_____

_____

_____

3.14 Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.15 Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.16 Hazard marking and lighting.

Statement: [Identify who will be responsible for maintaining hazard marking and lighting. Include a 24 hour phone number.]

_____

_____

_____

_____

3.17 Protection of taxiway and runway safety areas. Include object free areas, obstacle free zones, approach/departure surfaces and safety areas as required. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:

Equipment and methods for maintaining Taxiway/Taxilane Safety Area standards.

Statement: Information is provided in the CSPP. No supplemental information is required.

Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.18 Other limitations on construction.

Other limitations are identified in the CSPP and do not require an entry in this document.

APPENDIX 4

SPOIL DEPOSITION RELEASE FORM

SPOILS DEPOSITION RELEASE FORM

To: Nevada County Airport, Grass Valley, CA (OWNER), and

C&S Engineers, Inc., 8950 Cal Center Drive, Suite 112 (ENGINEER).

Project: PERIMETER FENCE & GATE SYSTEM UPGRADES, PHASE II

This SPOILS DEPOSITION RELEASE FORM is being forwarded to the above referenced OWNER and ENGINEER to satisfy the Contract Documents governing the above referenced project. Pursuant to the Contract Documents, LANDOWNER has granted permission to CONTRACTOR to deposit spoils at LANDOWNER'S property located at _____ (give specific location). Further, CONTRACTOR hereby agrees to the greatest extent of the law, to release, indemnify, hold harmless, and defend the OWNER and ENGINEER from any and all damage, liability, or cost (including reasonable attorney's fees and cost of defense) to the extent caused by or arising out of the deposition of the spoils on LANDOWNER'S property.

CONTRACTOR:	**LANDOWNER:**
_____	_____
Signature	Signature
_____	_____
Written Name & Title	Written Name & Title
_____	_____
Company Name	Company Name
_____	_____
Mailing Address (Street Name and Number)	Mailing Address (Street Name and Number)
_____	_____
City, State, Zip Code	City, State, Zip Code
_____	_____
Daytime Phone Number (Include Area Code)	Daytime Phone Number (Include Area Code)
_____	_____
Date	Date

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the Engineer, or his or her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.

The term "ton" will mean the short ton consisting of 2,000 lb (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight

measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kg) or hundredweight (km).

Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1%.

In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the

Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND of this section. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. The Owner must ensure prompt and full payment of retainage from the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section. The balance, 90% of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his or her option, as

provided in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95% of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50-16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:

   (1) The Contractor's failure to conform to contract requirements; or

   (2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within fourteen (14) days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and

(3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

i. The Owner and Engineer shall perform a warranty inspection with the Contractor approximately three (3) months before the end of the one year warranty period.

90-11 Project closeout. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual.

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

m. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706) from the Prime Contractor.

n. Contractor's Affidavit of Release of Liens (AIA Document G706A) from the Prime Contractor.

o. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706) from each subcontractor.

p. Contractor's Affidavit of Release of Liens (AIA Document G706A) from each subcontractor.

q. Consent of Surety to Final Payment (AIA Document G707) from the Prime Contractor.

END OF SECTION 90

Section 105 Mobilization

105-1 Description. This item shall consist of work and operations, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-1.1 Posted notices. Prior to commencement of construction activities the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-2 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 25%.
b. When 25% or more of the original contract is earned, an additional 25%.
c. When 50% or more of the original contract is earned, an additional 40%.
d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by 90-11, the final 10%.

END OF SECTION 105

Section 200 Special Provisions to the General Provisions

200-01 Special Provisions to Section 10.

Additions to the end of Section 10-06 Airport.

The name of the Airport where this project is located is Nevada County Airport.

Additions to the end of Section 10-20 Engineer.

The Engineer for this project is C&S Engineers, Inc., 8950 Cal Center Drive, Suite 112, Sacramento, CA 95826.

Additions to the end of Section 10-24 Federal Specifications.

They may be obtained from:

DODSSP
Standardization Document Order Desk
700 Robbins Avenue, Bldg. 4D
Philadelphia, PA 19111-5094

Additions to the end of Section 10-33 Owner.

Whenever the words "Owner", "Sponsor", "City", "Nevada County", or "Party of the first part" are used, the same are understood to mean the County of Nevada or its representative duly authorized to act.

10-53 Contract Drawings. The Plans.

10-54 Subcontractor. The subcontractor refers any individual, firm, or corporation to whom the contractor, with approval of the Owner, sublets any part of work.

10-55 Time and Materials Work. An item or items of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified and an agreed price cannot be agreed upon. The Contractor shall perform this work and the Owner agrees to pay the Contractor based upon the work performed by the Contractor's employees and subcontractors, and for materials and equipment used in the construction (along with the Contractor's allowed overhead and profit).

200-02 Special Provisions to Section 20.

Additions to the end of Section 20-02 Qualification of bidders.

e. A list of the categories of work to be performed by the bidder's work force and a list of work to be subcontracted out (See Section 80-01).

f. A list of construction projects completed in the past five years. The list shall include the project name, completion date, total contract value, value of bidder's portion of the work, engineer and owner contact information (names and phone numbers).

g. A list of construction projects in progress and under contract including the project name, percent complete, estimated completion date, total contract value, value of bidder's portion of the work, engineer and owner contact information (names and phone numbers).

h. A Schedule of Values showing the following information:

1. For each lump sum bid item: Provide a breakdown of values for major products, assemblies or operations, indicating separate amounts for (a) purchased materials, (b) labor, and (c) construction equipment, which total to the lump sum price bid for each item.

2. For each unit price bid item: Provide a breakdown of values for the unit price allocated to (a) purchased materials, (b) labor, and (c) construction equipment which total to the unit price bid for each item.

The Schedule of Values will be reviewed by the Engineer. Any additional detail or justification for cost distribution shall be provided by the apparent low bidder upon request. The Schedule of Values shall serve as a basis for computing progress payments during construction for installed portions of lump sum items, and to assist the Engineer in determining if change order costs are reasonable.

i. The bidder and all subcontractors shall provide evidence of appropriate state contracting license for the categories of work performed. The bidder must have a Class "A" License as determined by the California State License Board.

Additions to the end of Section 20-03 Contents of proposal forms.

Only original proposals issued by the Owner or Owner's Representative will be acceptable.Duplicated proposals, or proposals that are available for viewing from the various plan holders' websites which are downloaded and/or printed will be considered irregular.

Additions to the beginning of Section 20-07 Preparation of proposal.

DO NOT REMOVE the Proposal from the Contract Documents. All parts of the Contract Documents must be submitted with the proposal.

In the first sentence of the first paragraph of Section 20-07 Preparation of proposal, after "the Owner", INSERT the following, "and shall be on the plan holders list"

Additions to the end of the second paragraph of Section 20-07 Preparation of proposal.

Prices shall be written in whole dollars and cents. The extended total amount of each item should not be rounded.

In the first sentence of the first paragraph of Section 20-10 Bid guarantee, after "shall be accompanied by a certified check,", INSERT the following, "bid bond,"

Additions to the end of Section 20-11 Delivery of proposal.

No faxed or emailed proposal will be accepted. The official time shall be kept locally by the Owner.

20-15 Addenda and interpretation. No interpretation of the meaning of the Contract Documents, Contract Drawings or other portions of the Contract will be made orally. Every request for such interpretation must be in writing and addressed to C&S Engineers, Inc., , and to be given consideration must be received at the above address at least seven (7) days prior to the date fixed for opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda, which, when issued, will be sent by certified mail with return receipt requested, or by confirmed facsimile to all holders of Contract Documents at the respective addresses furnished for such purposes, not later than twenty-four (24) hours prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addenda or interpretation shall not relieve said Bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract.

200-03 Special Provisions to Section 30.

Additions to the end of the first paragraph of Section 30-01 Consideration of proposals.

Where discrepancies in the unit bid prices occur, and where discrepancies in the product of the quantities and unit bid prices occur, and where discrepancies in the summation of the products occur, the Owner will make the necessary corrections and the corrected values will be used in the Owner's consideration of proposals.

Additions to the end of Section 30-02 Award of contract.

The Owner reserves the right to award only the Base Bid, to award any Alternate Bid (if Alternates are an option), or to award either the Base Bid or the Alternate Bid plus any or all Add-On Bids (if Add-On bids are an option).Where discrepancies occur that affect the bid total(s) as described in the subsection titled CONSIDERATION OF PROPOSALS, the contract amount awarded will reflect the corrected values.

Where alternate bids and/or add-on bids are included in the proposal, the lowest qualified bidder will be determined by comparison of the combination of base bid, or alternate bid, plus add-on bids which are chosen by the Owner to be awarded.

Additions to the end of Section 30-05 Requirements of contract bonds.

The successful bidder shall submit in triplicate, a "Performance Bond" guaranteeing the performance of the work equal to one hundred percent (100%) of the amount of the Contract awarded, and a "Labor and Material Payment Bond" guaranteeing the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work equal to one hundred percent (100%) of the amount of the Contract awarded.

Additions to the end of Section 30-06 Execution of contract.

The Contractor shall also furnish the required insurance certificates in accordance with the subsection titled RESPONSIBILITY FOR DAMAGE CLAIMS of Sections 70 and 200. The successful bidder shall recognize that the proposal included in the contract for execution may differ from the proposal which was submitted with their bid. The proposal included in the contract for execution will include corrections to discrepancies which were discovered during the Owners consideration of proposals, and will contain only the pages from the successful bidder's proposal which cover the bids which were awarded. As a result, the proposal pages in the contract to be executed may contain pages which are not consecutively numbered due to the intentional omission of those proposal pages which cover bids that were not awarded.

49 CFR Part 26 provides that each contract the owner signs with a contractor (and each subcontract the prime contractor signs with a subcontractor) shall include the following assurance:

"The contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.

The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of Department of Transportation (DOT) assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate."

200-04 Special Provisions to Section 40.

Additions to the end of Section 40-02 Alteration of work and quantities

However, if the Contractor elects to waive the limitations on work that increase or decrease the originally awarded contract or any major contract item by more than 25 percent, the supplemental agreement shall be subject to the same U.S. Secretary of Labor wage determination as was included in the originally awarded contract.

All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

Additions to the end of Section 40-04 Extra work.

Extra work to be performed on the basis of agreed prices where no applicable unit or lump sum prices have been included in the Contract shall be based upon the Contractor's price analysis for the work. The price analysis will be completed as outlined in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

40-09 Debris. The Contractor shall remove all debris and rubbish resulting from his work at frequent intervals, and upon the order of the Engineer. Upon completion, Contractor shall leave the premises broom-clean and everything in perfect order and repair. Upon neglect or refusal of Contractor to keep the premises clean, the Engineer shall have the authority to have such work performed, and the cost of the same shall be charged to the Contractor in default and collected from any monies which have or may become due on this Contract; and the Engineer shall issue no certificates of payment on the Contract until premises are clean, in good order, and all claims created properly adjusted.

200-05 Special Provisions to Section 50.

Additions to the end of Section 50-03 Coordination of contract, plans, and specifications.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

Additions to the beginning of the third paragraph of Section 50-06 Construction layout and stakes.

Additional construction staking and layout may be required by technical specifications.

50-17 Removal of water. The Contractor shall at all times during construction, provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work or the proper placing of materials or other work.

Removal of water includes the construction and removal of cofferdams, sheeting and bracing, the furnishing of materials and labor necessary therefore, the excavation and maintenance of ditches and sluiceways and the furnishing and operation of pumps, wellpoints and appliances needed to maintain thorough drainage of the work in a satisfactory manner.

Water shall not be allowed to rise over or come in contact with any masonry, concrete or mortar, until at least twenty-four (24) hours after placement and no stream of water shall be allowed to flow over such work until such time as the Engineer may permit.

Unless otherwise specified, all excavations which extend down to or below the static groundwater elevations at the sites of structures shall be dewatered by lowering and maintaining the groundwater beneath such excavations at an elevation not less than that specified herein at all times when work thereon is in progress, during subgrade preparation and the placing of the structure or other materials thereon.

Where the presence of fine granular subsurface materials and a high groundwater table may cause the upward flow of water into the excavation with a resulting quick condition, the Contractor shall install and operate a suitable dewatering system to prevent the upward flow of water during construction.

When the water table is within the capillary rise of silt/clay subsurface material, the Contractor shall select and operate his equipment in a manner to prevent the deterioration of the working surface due to the upward flow of water during construction.

The effluent pumped from the dewatering system shall be examined periodically by qualified personnel to determine if the system is operating satisfactorily without the removal of fines.

Unless otherwise directed by the Engineer or shown on the Contract Documents, the water level shall not be permitted to rise until construction in the immediate area is completed and the excavation backfilled to the original grade or proposed grade.

Where well points are used, the groundwater shall be lowered and maintained continuously (day and night) at a level not less than two (2) feet below the bottom of the excavation. Excavation will not be permitted at a level lower than two (2) feet above the water level as indicated by the observation wells.

The wellpoint system shall be designed or installed by or under the supervision of an organization whose principal business is wellpointing and has at least five (5) consecutive years of similar experience and can furnish a representative list of satisfactory similar operations. Wellpoint headers, points and other pertinent equipment shall not be placed within the limits of the excavation in such a manner or location as to interfere with the laying of pipe or trenching operations or with the excavation for and/or construction of other structures. Standby gasoline or diesel powered equipment shall be provided so that in the event of failure of the operating equipment, the standby equipment can be readily connected to the dewatering system. The standby equipment shall be maintained in good order and actuated regularly not less than twice a week when directed.

Wellpoints shall be installed in the center of a sand wick drain which shall be placed by means of a sanding shell or other approved means to provide a sand core not less than ten (10) inches in diameter.

Detached observation wells of similar construction to the wellpoints shall be installed at intervals of not less than fifty (50) feet along the opposite side of the trench from the header pipe and line of wellpoints, or around the excavation for a structure or as shown on the Contract Drawings, to a depth of at least five (5) feet below the proposed excavation. In addition, one wellpoint in every fifty (50) feet shall be fitted with a tee, plug and valve so that the wellpoint can be converted for use as an observation well. Observation wells shall be not less than one and one-half (12) inch in diameter.

Water pumped or drained from excavations, or any sewers, drains, or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction, or to pavements, roads and drives. No water shall be discharged to sanitary sewers. Sanitary sewage shall be pumped to sanitary sewers or shall be disposed of by an approved method.

Any damage caused by improper handling of water shall be repaired by the Contractor at his/her own expense.

200-06 Special Provisions to Section 60.

Additions to the end of 60-01 Source of supply and quality requirements.

All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification.

The Contractor shall prepare a project Operations and Maintenance (O&M) Manual for the Owner. The O&M Manual shall consist of approved certification submittals, approved shop and setting drawing submittals, approved catalogue data submittals, and Operations & Maintenance Manuals for equipment installed that have operating procedures and/or maintenance requirements associated with them. The O&M manual shall be neatly bound in a properly sized 3-ring binder and tabbed by specification section. The O&M Manual shall be submitted to the Engineer prior to final payment to facilitate project closeout.

Additions to the end of the second paragraph of Section 60-02 Samples, tests, and cited specifications.

THE COST OF ALL FAILING TESTS SHALL BE BORNE BY THE CONTRACTOR.

Additions to the end of the first paragraph of 60-03 Certification of compliance.

Manufacturer's certificates of compliance shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer, and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

60-09 Shop and setting drawings and catalogue data. All materials and equipment used in the work shall be submitted to the Engineer for review by the Engineer for approval prior to ordering the equipment. All information required for the Engineer's review of each particular pay item shall be sent as one submittal. In addition, if the pay item interfaces with other pay items (as in the case of electrical equipment), then the submittals covering the interfacing pay items shall be sent at the same time. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable). Drawings and data shall be submitted sufficiently in advance of the work to permit proper review, including time for necessary revisions and re-submittals. The

Contractor is solely responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

Shop and setting drawings shall present complete and accurate information relative to all working dimensions, equipment weight assembly and sectional view, all the necessary details, pertaining to coordinating the work of the Contract, lists of materials and finishes, parts lists and the description thereof, lists of spare parts and tools where such parts or tools are required, no-scale control diagrams for control wiring and control piping, and any other items of information that are required to demonstrate detail compliance with the Plans and Specifications. Each drawing shall be dated and shall show the name of the Project, Contract Number and the name of the manufacturer of the equipment covered by the drawing or drawings. The Engineer will not review any drawings that are not properly identified or that do not contain complete data on the work or that have not been checked, stamped and signed by the Contractor for compliance with the Contract Documents.

The Engineer's review of the Contractor's Shop Drawings signifies only that such drawings appear to be in substantial conformity with the Contract Drawings and Contract Documents or with the Engineer's instructions. Such review does not indicate approval of every detail of the drawings nor of the work methods of the Contractor which are indicated thereon. Regardless of the corrections made in or made of such drawings by the Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings, for their conformity to the Plans and Specifications and for the proper fitting and construction of the work.

No work covered by shop and setting drawings shall be done until the drawings have been reviewed and found acceptable by the Engineer. No payment shall be made on any item for which submittals are not received and found acceptable by the Engineer.

60-10 Electrical shop drawings. Drawings for electrical equipment shall show physical dimensions and installation details and shall include elementary and connection diagrams for each control assembly and the interconnection diagrams for all equipment. The drawings shall show clearly the coordination of control work, shall identify the components external to electrical equipment and shall define the contact arrangement and control action of the primary and final control elements.

Where standard electrical control equipment having complex internal wiring is required, such as control panels, generator transfer panels, electric or electronic instruments and similar items, the detail shop wiring diagrams for such equipment will not be required, and, if submitted, will in general not be reviewed. The submittal for each such item of equipment shall, however, include an elementary diagram of the input and output elements which require connections to external equipment, and/or a complete step by step description of the control action of the equipment being submitted. In the event that any questions arise as to the type of information to be presented on the submittal, the supplier shall direct inquiries to the Engineer through the Prime Contractor in advance of the preparation of his/her submittal.

60-11 Substitute items. If in the Engineer's sole judgment an item of material or equipment proposed by the Contractor does not qualify as an "or-equal" item, it will be

considered a substitute item. The Contractor shall submit sufficient information as provided below to allow the Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. The procedure for review by the Engineer will include the following and as the Engineer may decide is appropriate under the circumstances. Requests for review of substitute items of material or equipment will not be accepted by the Engineer from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or equipment, the Contractor shall first make a written application through the Engineer to the Engineer for acceptance thereof, certifying that the substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the substitute will prejudice the Contractor's achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents or Contract Drawings (or in the provisions of any other direct contract with the Owner for work on the Project) to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the work is subject to payment of any license fee or royalty. If the substitute item requires modifications to any existing features or to any proposed work, the application shall also include details of proposed modifications necessary to accommodate the substitute item. Such details shall include scaled layouts, dimensions and other pertinent information to enable the Engineer to accurately assess the entire application. If the substitute item and proposed modifications are approved, the Contractor, at no additional cost to the Owner, shall do all work necessary to make such modifications and absorb all costs of any related changes imposed on other Contractor's. All variations of the substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by the Engineer in evaluating the substitute. The Engineer may require the Contractor to furnish additional data about the substitute.

A. **Engineer's Evaluation**. The Engineer will be the sole judge of acceptability. No substitute will be ordered, installed or utilized without the Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. The Engineer will record time required by the Engineer and the Engineer's Consultants in evaluating substitutes proposed or submitted by the Contractor and in making changes in the Contract Documents or Contract Drawings (or in the provisions of any other direct contract with Owner for work on the Project) occasioned thereby. The Engineer's charges shall be at the same rates the Engineer charges for such services to the Owner.

B. **Contractor's Expense.** All data to be provided by the Contractor in support of any substitute item will be at the Contractor's expense. In order to aid the Engineer in determining the equality of an or substitute item (when compared to the item actually specified), the Contractor shall arrange for the performance of any tests requested by the Engineer. The Engineer shall determine the nature, extent, tester and degree of supervision of such tests. Certified test results shall be mailed directly

to the Engineer for all tests requested. All costs of such tests, including engineering costs, shall be borne by the Contractor. The Owner may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute. Whether or not the Engineer accepts a substitute item so proposed or submitted by the Contractor, the Contractor shall reimburse the Owner for the charges of the Engineer and the Engineer's Consultants for evaluating each such substitute item. The costs for evaluating substitute items shall be deducted from the Owner's payment to the Contractor.

60-12 Submittal procedure. The following procedure has been established for the submittal and processing of shop and setting drawings, working drawings, and catalogue data. Departures from this procedure may result in delay and misunderstandings.

A. All information required for the Engineer's review of each particular pay item shall be sent as one submittal to the Engineer with an attached submittal cover sheet. In addition, if the pay item interfaces with other pay items (as in the case of electrical equipment), then the submittals covering the interfacing pay items shall be sent at the same time.

B. In submitting certifications, drawings, catalog data, and similar items for review, one (1) electronic copy shall be submitted via e-mail. One (1) electronic copy will be returned to the Contractor via e-mail and bearing the review stamp. The Contractor shall provide one (1) hard copy of each submittal for inclusion in the O&M Manual prior to contract closeout.

The Engineer shall be responsible for printing sufficient copies of each submittal for their own records. The Contractor shall be responsible for printing sufficient copies of each submittal for their own records and distributing to each of the other prime or subcontractors whose work is to be correlated with such submittals.

C. Submittals will be stamped by the Engineer as follows:

1. "Approved", if no change or rejection is made.

2. "Approved as Noted", if minor changes or additions are made, but re-submittal is not considered necessary. All copies will bear the corrective marks.

3. "Revise and Resubmit", if the changes requested are extensive. In this case, re-submittal after correction is necessary and the same number of copies shall be included in the re-submittal as in the first submittal.

4. "Rejected", if it is considered that the data submitted cannot with reasonable revision meet the requirements of the Plans and Specifications.

5. "Submit Specified Item", if the data submitted is not clear, complete, or for other reasons cannot be examined by the Engineer to establish compliance with the Plans and Specifications.

D. Unless otherwise approved in specific cases, all submittals must be transmitted by the Prime Contractor, not by the Subcontractors or vendors.

Any changes in re-submittals, other than those indicated as requested, must be specifically brought to the attention of the Design Engineer. Changes or additions shall not be made in, or to, any fabricated item, part or material without having a re-review.

200-07 Special Provisions to Section 70.

In the second sentence of the first paragraph of Section70-01 Laws to be observed, after "indemnify the Owner", INSERT the following, " the Engineer," and after "all of his or her officers", INSERT the following, " directors, representatives,".

In the second sentence of the first paragraph of Section 70-03 Patented devices, materials, and processes, after "hold harmless the Owner,", INSERT the following, " the Engineer," and after "shall indemnify the Owner,", INSERT the following, " the Engineer".

Additions to the end of Section 70-10 Protection and restoration of property and landscape.

The Contractor shall indemnify the Owner for any and all costs for the repair or replacement of the Owner's property including, but not limited to, buildings and roads, which arise from or in any manner grow out of any act or neglect on or about the Project site by the Contractor and anyone for whom the Contractor is legally liable.

In the first sentence of Section 70-11 Responsibility for damage claims, after, "The Contractor shall", INSERT the following, "defend". After, "Engineer and the Owner and their", INSERT the following, "respective representatives, directors,". After, "employees from all suits, actions,", INSERT the following, "damages, costs, expenses". After, "or claims, of any character", INSERT the following, "(including attorney's fees) and liability (including statutory liability)". After, "neglect, or misconduct of said Contractor", INSERT the following, "or arising out of or related to any negligence of the Contractor or anyone for whom the Contractor is legally liable in performing or safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any and all environmental impairment; or because of any act or omission, neglect, or misconduct of said Contractor or anyone for whom the Contractor is legally liable;".

Additions to the end of the first paragraph of Section 70-11 Responsibility for damage claims.

As a material part of the consideration to be rendered by the Owner, the Contractor hereby waives all claims against the Owner for damages to the goods, wares, and merchandise in, upon, or about the Project, and the Contractor will hold the Owner exempt and harmless from any damage and injury to any such person or to the goods, wares, or merchandise of any such person, arising from the use of the Project site by the Contractor or from failure of the Contractor to keep the Project site in good condition and repair as provided in this Section.

Additions to the end of Section 70-11 Responsibility for damage claims.

Owner shall timely notify the Contractor of the receipt of any third-party claim, relating to the contract. Owner shall be entitled to recover its reasonable costs incurred in providing such notification.

The Contractor, at his own expense, shall procure and maintain, until final acceptance by the Owner of the work covered by the Contract, comprehensive liability insurance for damages imposed by law of the kinds and in the amounts hereinafter provided, written by a financially solvent insurance company authorized to do such business and write such coverage in the place where the Project is located, covering all operations under the Contract, whether performed by the Contractor or by its Subcontractor(s). Before commencing the work, the Contractor shall furnish to the Owner three (3) certificates of insurance, in satisfactory form to the Owner, showing that the Contractor has complied with the requirements of this Section. The policies and certificates shall provide that the policies shall not be changed or canceled until thirty (30) days after written notice thereof has been given to each of the Additional Insureds listed below. Property damage insurance shall include coverage for explosion, collapse, and underground operations (X C U hazards).

A. The kinds and amounts of insurance are as follows:

1. General Liability insurance policies shall be Commercial General Liability Insurance (including premises operations, independent contractors, products/completed operations, explosion, collapse and underground hazard, broad form property damage, and blanket contractual liability coverages) and shall be written on an Occurrence basis with the following minimum limits:

Each Occurrence	$1,000,000
General Aggregate	$2,000,000

As an alternative to the above limits for General Aggregate and Each Occurrence, Contractor may elect to provide Excess Liability Insurance. Excess Liability coverage shall likewise be written on an Occurrence basis. If the Contractor so elects, then the sum of the General Liability Each Occurrence limit and the Excess Liability Each Occurrence limit shall total at least $1,000,000. The sum of the General Liability General Aggregate limit and the Excess Liability Aggregate limit shall total at least $2,000,000.

2. Automobile Liability policies shall cover "All Owned", "Scheduled", "Hired" and "Non-Owned" autos. The minimum Combined Single Limit shall be $1,000,000.

As an alternative to the above limit for Automobile Liability, Contractor may elect to provide Excess Liability Insurance. Excess Liability coverage shall be written on an Occurrence basis. If the Contractor so

elects, then the sum of the Combined Single Limit and the Excess Liability Each Occurrence limit shall total at least $1,000,000.

3. Policy or policies covering the obligations of the Contractor in accordance with the provisions of any applicable Worker's Compensation or Disability Benefits Law.

4. If applicable, the Contractor and its Subcontractor(s) engaged in work involving "hazardous substances," as defined in Section 3 of PL 1993, c. 139 (C.13:1K-8), or "hazardous waste," as defined in Section 1 of PL 1976, c. 99 (C.13:1E-38), shall procure and maintain pollution liability insurance, also known as "environmental impairment liability insurance."

B. Contractor's insurance shall be primary over all other collectible insurance.

C. Anti-subrogation applies to General Liability and to Automobile Liability insurance coverages.

D. The Certificate Holder shall be Nevada County and C&S Engineers, Inc.

E. The following shall be named as Additional Insureds: Nevada County; C&S Engineers, Inc.; the Federal Aviation Administration; CalTrans.

F. The General Liability policies shall provide coverage for liability for damages imposed by law upon the Contractor and its Subcontractor(s) with respect to all work performed by any of them under the Contract. The insurance company providing General Liability insurance coverage acknowledges that the Contractor has agreed in this Contract to defend, hold harmless, and indemnify the Owner, the Engineer, and their respective directors, officers, representatives and employees as set forth in this Section.

G. The Contractor's policies shall provide coverage for contractual liability imposed by contract, including this Contract, and completed operations liability for damages imposed by law arising between the date of the certification of completion of the work and the date of the expiration of the Contractor's guarantee.

H. Contractor's policy shall provide coverage for liability arising out of the acts or omissions of its Subcontractors.

I. Each Subcontractor employed on the Project site by the Contractor shall provide comprehensive liability insurance in accordance with the above-described requirements of the Contractor. Such insurance requirements shall be submitted to the Engineer as part of the Subcontractor approval process.

Additions to the end of the first paragraph of Section 70-19 Environmental protection.

The Contractor shall perform all testing, removal of contaminated material, transportation, treatment, remediation, and disposal of contaminated materials which are the result of a spill or release caused by the Contractor, and he shall provide and properly place materials to restore the property to its original condition, all to the Owner's satisfaction and at the Contractor's expense. Refer to the subsection 70-10 titled PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE of this section.

A. Air Pollution

1. No burning of combustible waste shall be permitted.

2. Alternatives to Burning Land Cleared Material.
   a. All spoil material from clearing and grubbing operations shall be disposed of in accordance with the Technical Specifications, unless otherwise directed.
   b. Wood may be salvaged for firewood or commercial use or it may be chipped and disposed of for use as mulch.
   c. Logs, brush, etc. may be removed to an authorized disposal area or disposed of to the general public without charge.

3. Dust Control.
   a. Common construction operations which may cause excessive dust include:
      1) Quarry, drilling and rock crushing.
      2) Clearing, grubbing and stripping.
      3) Excavation and placement of embankment.
      4) Cement and aggregate handling.
      5) Cement or lime stabilization.
      6) Blasting.
      7) Use of haul roads.
      8) Sandblasting or grinding.

   b. Other construction operations which may cause air pollution are:
      1) Volatiles escaping from asphalt and cut back materials.
      2) Use of herbicides or fertilizers.
      3) Smoke from asphalt plants or heater/planers.

   c. Control of Dust and Other Air Pollutants shall be the responsibility of the Contractor and may include the following control methods:
      1) Drilling apparatus equipped with water or chemical dust controlling systems.
      2) Exposing the minimum area of land.
      3) Applying temporary mulch with or without seeding.
      4) Use of water sprinkling trucks.
      5) Use of covered haul trucks.

6) Use of stabilizing agents in solution.
7) Use of dust palliative and penetration asphalt on temporary roads.
8) Use of wood chips in traffic or work areas.
9) Use of vacuum equipped sandblasting systems.
10) Use of plastic sheet coverings.
11) Restricting the application rate of herbicides to recommended dosage. Materials should be covered and protected from the elements. Application, equipment and empty containers shall not be rinsed and discharged to a stream, etc. or allowed to enter the groundwater.
12) Use dust control measures at bituminous mixing plants, and quarry operations.
13) Delay operations until climate or wind conditions dissipate or inhibit the potential pollutants in a manner satisfactory to the Engineer.

B. Water Pollution

1. The Contractor shall use suitable precautions to minimize water pollution during the progress of the work. Erosion control devices or methods may consist of berms, dikes, dams, drains, sediment basins, fiber mats, woven plastic filter cloths, gravel, mulches, quick growing grasses, sod, bituminous spray or other control devices.

2. The amount of surface area of erodible earth at any one time shall not exceed the area allowed by permit.

3. Pollutants such as fuels, lubricants, bitumens, raw sewage and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or man-made channels leading thereto. Wash water or waste from concrete mixing and curing operations should not be allowed to enter streams, etc.

In the event of conflict between these requirements and pollution control laws, rules or regulations or other Federal, State or local agencies, the more restrictive laws, rules, or regulations shall apply.

70-21 Required contract provisions for airport improvement program

1. ACCESS TO RECORDS AND REPORTS.
(Reference: 2 CFR § 200.336, 2 CFR § 200.333, FAA Order 5100.38)

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives, access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books,

records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

2. BUY AMERICAN PREFERENCE STATEMENT
(Reference: Title 49 USC § 50101)

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must complete and submit the Buy America certification included herein with their bid or offer. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

NOTE: Certifications are included in the PROPOSAL.

3. GENERAL CIVIL RIGHTS PROVISIONS
(Reference: 49 USC § 47123)

The contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractor and subtier contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

4. CIVIL RIGHTS – TITLE VI ASSURANCE
(Reference: 49 USC § 47123 and FAA Order 1400.11)

Title VI Solicitation Notice:

The (Name of Sponsor), in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Compliance with Nondiscrimination Requirements:

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

    a. Withholding payments to the contractor under the contract until the contractor complies; and/or

    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation

Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI List of Pertinent Nondiscrimination Acts and Authorities:

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;

- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

5. DISADVANTAGED BUSINESS ENTERPRISES (Reference: 49 CFR part 26)

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from Nevada County. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Nevada County. This clause applies to both DBE and non-DBE subcontractors.

The following language in this section was taken from various sections of 49 CFR Part 26 titled Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs. They are not intended to be all encompassing, nor a comprehensive reiteration of the regulation.

Race/Gender Neutral Language - The requirements of 49 CFR part 26 apply to this contract. It is the policy of the County of Nevada to practice nondiscrimination based on

race, color, sex or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

The bidder shall submit the Contractor's DBE Plan to the owner for review and approval. The Contractor's DBE Plan shall consist of the Contractor's DBE Plan Form, a DBE Letter of Intent Form for each DBE firm, a copy of the DBE's Evidence of Certification Status, and documented good faith efforts as described below. **SEE THE CONTRACTORS DBE PLAN FORM AND DBE LETTER OF INTENT FORM FOLLOWING THIS SECTION THIS MUST BE SUBMITTED WITHIN 10 BUSINESS DAYS OF REQUEST.**

A. The Sponsor has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. The Sponsor has received, or will receive, Federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, the Sponsor has signed an assurance that it will comply with 49 CFR Part 26.

   It is the policy of the Sponsor to ensure that DBEs as defined in part 26, have an equal opportunity to receive and participate in DOT–assisted contracts. It is also the policy of the Sponsor:

   1. To ensure nondiscrimination in the award and administration of DOT – assisted contracts;
   2. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
   3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
   4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
   5. To help remove barriers to the participation of DBEs in DOT assisted contracts;
   6. To assist the development of firms that can compete successfully in the market place outside the DBE Program.

B. The obligation of the bidder is to make good faith efforts. The bidder can demonstrate that it has done so either by meeting the contract goal or documenting good faith efforts. Examples of good faith efforts are found in Appendix A to Part 26. Determination whether the bidder has made a good faith effort will be made by the Sponsor's DBE Liaison Officer. The Contractor's DBE Plan must be acceptable to the Sponsor before entering into a contract with the bidder.

   Guidance pertaining to good faith efforts is provided in Appendix A to 49 CFR Part 26. In general, the bidder must demonstrate that they have taken all necessary and reasonable steps to achieve the identified DBE goal. The bidder should adequately document all such efforts, including contacts of DBE firms that are not interested.

   <u>Good Faith Efforts:</u>

Bidder must demonstrate that they made good faith efforts to achieve participation with DBE firms. This requires that the bidder show that it took all necessary and reasonable steps to secure participation by certified DBE firms. Mere pro forma efforts will not be considered as a good faith effort.

Such actions constituting evidence of good faith efforts include but are not limited to:

- Soliciting DBE participation through all reasonable and available means. This may include public advertisements and phone calls/faxes to known certified DBE firms.
- Consult State Department of Transportation office to obtain a list of certified DBE firms.
- Selecting portions of work that increases the likelihood that DBE firms will be available to participate.
- Providing DBE firms with sufficient information and time to review the project pans and specifications.
- Documenting all contacts with DBE firms. This includes name, address, phone number, date of contact and record of conversation/negotiation.

C. Within 15 days of being informed by the Sponsor that it is not responsive because it has not documented sufficient good faith efforts, a bidder may request administrative reconsideration. Bidders should make this request in writing to the Sponsor's reconsideration official. The reconsideration official will not have played any role in the original determination that the bidder did not document sufficient good faith efforts.

As part of this reconsideration, the bidder will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. The bidder will have the opportunity to meet in person with the reconsideration official to discuss the issue of whether it met the goal or made adequate good faith efforts to do. The Sponsor will send the bidder a written decision on reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The result of the reconsideration process is not administratively appealable to the Department of Transportation.

D. The Sponsor will require the contractor to make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the contract goal. The Sponsor will require the prime contractor to notify the DBE Liaison officer immediately of the DBE's inability or unwillingness to perform and provide reasonable documentation.

In this situation, the Sponsor will require the prime contractor to obtain prior approval of the substitute DBE and to provide copies of new or amended subcontracts, or documentation of good faith efforts.

If the contractor fails or refuses to comply in the time specified, the Sponsor will issue an order stopping all or part of payment/work until satisfactory action has been taken. If the contractor still fails to comply, the contracting officer may issue a termination for default proceeding.

E. The sponsor will require the contractor to maintain records and documents of payments to DBEs for three years following the performance of the contract. These records will be made available for inspection upon request by any authorized representative of the Sponsor or DOT. This reporting requirement also extends to any certified DBE subcontractor.

The Sponsor will perform interim audits of contract payments to DBEs. The audit will review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in The Contractors DBE Plan.

At completion of work, the contractor will report to the Sponsor the actual amount paid to each DBE firm utilized for this contract. **SEE THE DBE PARTICIPATION SUMMARY FORM FOLLOWING THIS SECTION.**

F. Fostering Small Business Participation (49 CFR Part 26, §26.39).

In accordance with 49 CFR Part 26.39, the Sponsor has created a Small Business Element to structure contracting requirements to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation, including unnecessary and unjustified bundling of contract requirements that may preclude small business participation in procurements as prime contractors or subcontractors. For clarification purposes, 49 CFR Part 26.5 states "Small business concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b)."

49 CFR Part 26 §26.65(b) states "Even if it meets the requirements of paragraph (a) of this section, a firm is not an eligible DBE in any Federal fiscal year if the firm (including its affiliates) has had average annual gross receipts, as defined by SBA regulations (see 13 CFR 121.402), over the firm's previous three fiscal years, in excess of $23.98 million. 13 CFR 121.402 defines the size standards that are applicable to Federal Government Contracting programs.

In compliance with this policy, the Sponsor's DBE Program in regard to §26.39 Fostering Small Business Participation may include, but is not limited to, the following strategies:

1. Set asides: Where feasible, the Sponsor will establish a percentage of the total value of all prime contract and subcontract awards to be set aside for

participation by small businesses on FAA-assisted contracts. A "set-aside" is the reserving of a contract or a portion of a contract exclusively for participation by small businesses. This requires that the Sponsor and its prime contractors/consultants set aside a portion of the value of each contract for participation by small businesses. A small business set-aside is open to all small businesses regardless of the owner's gender, race or geographic location. The DBELO, along with the project engineer will review FAA-assisted purchases and contracts to assess the small business opportunities, giving consideration to the size and scope of each purchase or contract to establish the set aside percentage. This set aside is in addition to the DBE contract goals which may be required pursuant to applicable law or policy. In the event that a set-aside is not established on an FAA-assisted contract, the project manager and small business officer will document why a small business set-aside is inappropriate.

2. Unbundling: The Sponsor, where feasible, may "unbundle" projects or separate large contracts into smaller contracts which may be more suitable for small business participation. The Sponsor will conduct contract reviews on each FAA-assisted contract to determine whether portions of the project could be "unbundled" or bid separately. Similarly, the Sponsor will encourage its prime contractors or prime consultants to unbundle contracts to facilitate participation by small businesses.

6. ENERGY CONSERVATION REQUIREMENTS (Reference: 2 CFR § 200, Appendix II(H))

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201et seq).

7. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE) (Reference: 29 U.S.C. § 201, et seq)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division

8. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (Reference: 20 CFR part 1910)

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

9. TRADE RESTRICTION CERTIFICATION (Reference: 49 USC § 50104 and 49 CFR part 30)

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

d. This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

10. VETERAN'S PREFERENCE
(Reference: 49 USC § 47112(c))

In the employment of labor (excluding executive, administrative, and supervisory positions), the contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

11. SEISMIC SAFETY – not applicable

12. COPELAND "ANTI-KICKBACK" ACT
(Reference: 2 CFR § 200, Appendix II(D) and 29 CFR Parts 3 & 5)

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor

regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

TITLE 18, U.S.C.
Sec. 874. Kickbacks from public works employees
Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined under this title or imprisoned not more than five years, or both.

TITLE 40, U.S.C.
Sec. 3145. Regulations governing contractors and subcontractors

(a) In General.—The Secretary of Labor shall prescribe reasonable regulations for contractors and subcontractors engaged in constructing, carrying out, completing, or repairing public buildings, public works, or buildings or works that at least partly are financed by a loan or grant from the Federal Government. The regulations shall include a provision that each contractor and subcontractor each week must furnish a statement on the wages paid each employee during the prior week.

(b) Application.—Section 1001 of title 18 applies to the statements.

13. DAVIS-BACON REQUIREMTNS
(Reference: 2 CFR § 200, Appendix II(D) and 29 CFR Part 5)

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not

less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount

designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2 Withholding.

The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three

years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to

the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified

in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.
The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.
The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.
A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.
All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.
Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

14. DISTRACTED DRIVING
(Reference: Executive Order 13513 and DOT Order 3902.10)

Texting While Driving
In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.

15. AFFIRMATIVE ACTION REQUIREMENT
(Reference: 41 CFR part 60-4 and Executive Order 11246)

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   Timetables

   A. Goals for minority participation for each trade (Vol. 45 Federal Register pg. 65984 10/3/80) (6.8%)
   B. Goals for female participation in each trade (6.9%)

   These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

   The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is .

16. EQUAL EMPLOYMENT OPPORUNITY (E.E.O.)

(Reference: 2 CFR 200, Appendix II(C), 41 CFR § 60-1.4, 41 CFR § 60-4.3 and Executive Order 11246)

Equal Opportunity Clause
During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identify or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive

Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

EEO Specification

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

   d. "Minority" includes:

      (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);

      (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);

      (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

      (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their

training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

   c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such a superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Standard Form 100, Employer Information Report, must be filed by:
    A. All private employers who are:
        (1) subject to Title VII of the Civil Rights Act of 1964 (as amended by the Equal Employment Opportunity Act of 1972) with 100 or more employees EXCLUDING State and local governments, primary and secondary school systems, institutions of higher education, Indian tribes and tax-exempt private membership clubs other than labor organizations; OR
        (2) SUBJECT TO Title VII who have fewer than 100 employees if the company is owned or affiliated with another company, or there is

centralized ownership, control or management (such as central control of personnel policies and labor relations) so that the group legally constitutes a single enterprise, and the entire enterprise employs a total of 100 or more employees.

B. All federal contractors (private employers), who:
(1) are not exempt as provided for by 41 CFR 60-1.5,
(2) have 50 or more employees, and
(a) are prime contractors or first-tier subcontractors, and have a contract, subcontract, or purchase order amounting to $50,000 or more; or
(b) serve as a depository of Government funds in any amount, or
(c) is a financial institution which is an issuing and paying agent for U.S. Savings Bonds and Notes.

C. Standard Form 100 must be filed with the Joint Reporting Committee no later than September 30. Standard Form 100 is normally furnished to employers annually based on a mailing list maintained by the Joint Reporting Committee. In the event a Contractor has not received the form, it may be obtained from the Joint Reporting Committee, Post Office Box 779, Norfolk, Virginia 23501, telephone (757) 461-1213.

The Sponsor has determined that a SBE program is not feasible for this Contract.

17. NONSEGREGATED FACILITIES REQUIREMENT (Reference: 41 CFR § 60)

Prohibition of Segregated Facilities

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

NOTE: Certifications are included in the PROPOSAL.

18. PROCUREMENT OF RECOVERED MATERIALS (Reference: 2 CFR § 200.322 and 40 CFR part 247)

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or,

b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

b) Fails to meet reasonable contract performance requirements; or

c) Is only available at an unreasonable price.

19. TERMINATION OF CONTRACT (Reference: 2 CFR § 200 Appendix II(B) and FAA Advisory Circular 150/5370-10, Section 80-09)

Termination for Convenience

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.

2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.

3. Discontinue orders for materials and services except as directed by the written notice.

4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.

5. Complete performance of the work not terminated by the notice.

6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

a) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

b) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

c) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

d) reasonable and substantiated expenses to the contractor directly attributable to Owner's termination action

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

Termination for Default
Section 80-09 of FAA Advisory Circular 150/5370-10 establishes conditions, rights and remedies associated with Owner termination of this contract due default of the Contractor.

20. DEBARMENT AND SUSPENSION
(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200 and DOT Order 4200.5)

Certification of Offeror/Bidder Regarding Debarment
By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

Certification of Lower Tier Contractors Regarding Debarment
The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov

2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.

3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

NOTE: Certifications are included in the PROPOSAL.

21. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT REQUIREMENTS

(Reference: 2 CFR § 200, Appendix II(E))

1. Overtime Requirements.
No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.
In the event of any violation of the clause set forth in paragraph (1) of this clause, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard

workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.
The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.
The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

22. LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

(Reference: 31 U.S.C. § 1352 – Byrd Anti-Lobbying Amendment, 2 CFR part 200, Appendix II(J) and 49 CFR part 20, Appendix A)

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including

subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

23. BREACH OF CONTRACT TERMS
(Reference: 2 CFR § 200 Appendix II(A))

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

24. CLEAN AIR AND WATER POLLUTION CONTROL
(Reference: 2 CFR § 200, Appendix II(G))

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

70-22 CALTRANS standard specifications (section 7 selections) for California state contracts (Appendix A).

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following

clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

This contract shall be governed by the laws of the State of California except where the Federal supremacy clause requires otherwise.

7-1.01 Laws to be Observed. The Contractor shall keep fully informed of all existing and future State and Federal laws and county and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with, and shall cause all the Contractor's agents and employees to observe and comply with all existing and future laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the State of California, and all officers and employees thereof connected with the work, including but not limited to the Director and the Engineer, against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree, whether by the Contractor or the Contractor's employees. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Engineer in writing.

7-1.01A Labor Code Requirements. Attention is directed to the following requirements of the Labor Code:

7-1.01A(1) Hours of Labor. Eight hours labor constitutes a legal day's work. The Contractor or any subcontractor under the Contractor shall forfeit, as a penalty to the State of California, twenty-five dollars ($25) for each worker employed in the execution of the contract by the respective Contractor or subcontractor for each calendar day during which that worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the requirements of the Labor Code, and in particular, Section 1810 to Section 1815,thereof, inclusive, except that work performed by employees of Contractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon compensation for all hours worked in excess of 8 hours per day at not less than one and one-half times the basic rate of pay, as provided in Section 1815 thereof.

7-1.01A(2) Prevailing Wage. The Contractor and any subcontractor under the Contractor shall comply with Labor Code Sections 1774 and 1775. Pursuant to Section 1775, the Contractor and any subcontractor under the Contractor shall forfeit to the State or political subdivision on whose behalf the contract is made

or awarded a penalty of not more than fifty dollars ($50) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any public work done under the contract by the Contractor or by any subcontractor under the Contractor in violation of the requirements of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. The amount of this forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the mistake, inadvertence, or neglect of the Contractor or subcontractor in failing to pay the correct rate of prevailing wages, or the previous record of the Contractor or subcontractor in meeting their respective prevailing wage obligations, or the willful failure by the Contractor or subcontractor to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the Contractor or subcontractor had knowledge of the obligations under the Labor Code. In addition to the penalty and pursuant to Labor Code Section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or subcontractor. If a worker employed by a subcontractor on a public works project is not paid the general prevailing per diem wages by the subcontractor, the prime contractor of the project is not liable for the penalties described above unless the prime contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with all of the following requirements:

(1) The contract executed between the contractor and the subcontractor for the performance of work on the public works project shall include a copy of the requirements in Sections 1771, 1775, 1776, 1777.5, 1813 and 1815 of the Labor Code.

(2) The contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor.

(3) Upon becoming aware of the subcontractor's failure to pay the specified prevailing rate of wages to the subcontractor's workers, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project.

(4) Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to the subcontractor's employees on the public works project and any amounts due pursuant to Section 1813 of the Labor Code.

Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement shall notify the Contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor on that public works project to pay workers the general prevailing rate of per diem wages. If the Division of Labor Standards Enforcement determines that employees of a subcontractor were not paid the general prevailing rate of per diem wages and if the Department did not retain sufficient money under the contract to pay those employees the balance of wages owed under the general prevailing rate of per diem wages, the contractor shall withhold an amount of moneys due the subcontractor sufficient to pay those employees the general prevailing rate of per diem wages if requested by the Division of Labor Standards Enforcement. The Contractor shall pay any money retained from and owed to a subcontractor upon receipt of notification by the Division of Labor Standards Enforcement that the wage complaint has been resolved. If notice of the resolution of the wage complaint has not been received by the Contractor within 180 days of the filing of a valid notice of completion or acceptance of the public works project, whichever occurs later, the Contractor shall pay all moneys retained from the subcontractor to the Department. These moneys shall be retained by the Department pending the final decision of an enforcement action.

Pursuant to the requirements in Section 1773 of the Labor Code, the Department has obtained the general prevailing rate of wages (which rate includes employer payments for health and welfare, pension, vacation, travel time and subsistence pay as provided for in Section 1773.8 of the Labor Code, apprenticeship or other training programs authorized by Section 3093 of the Labor Code, and similar purposes) applicable to the work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned.

The general prevailing wage rates and any applicable changes to these wage rates are available at the Labor Compliance Office at the offices of the District Director of Transportation for the district in which the work is situated. General prevailing wage rates are also available from the California Department of Industrial Relations' Internet Web Site at: http://www.dir.ca.gov.

The wage rates determined by the Director of Industrial Relations for the project refer to expiration dates. Prevailing wage determinations with a single asterisk after the expiration date are in effect on the date of advertisement for bids and are good for the life of the contract. Prevailing wage determinations with double asterisks after the expiration date indicate that the wage rate to be paid for work performed after this date has been determined. If work is to extend past this date, the new rate shall be paid and incorporated in the contract. The Contractor shall contact the Department of Industrial Relations as indicated in the wage rate determinations to obtain predetermined wage changes.

Pursuant to Section 1773.2 of the Labor Code, general prevailing wage rates shall be posted by the Contractor at a prominent place at the site of the work.

Changes in general prevailing wage determinations which conform to Labor Code Section 1773.6 and Title 8 California Code of Regulations Section 16204 shall apply to the project when issued by the Director of Industrial Relations at least 10 days prior to the date of the Notice to Contractors for the project.

The State will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining the bid, and will not under any circumstances be considered as the basis of a claim against the State on the contract.

7-1.01A(2)(a) Travel and Subsistence Payments. Attention is directed to the requirements in Section 1773.8 of the Labor Code. The Contractor shall make travel and subsistence payments to each workman, needed to execute the work, in conformance with the requirements in Labor Code Section 1773.8.

7-1.01A(3) Payroll Records. Attention is directed to the requirements in Labor Code Section 1776, a portion of which is quoted below. Regulations implementing Labor Code Section 1776 are located in Sections 16016 through 16019 and Sections 16207.10 through 16207.19 of Title 8, California Code of Regulations.

(a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

(1) The information contained in the payroll record is true and correct.

(2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the contractor.

(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in a manner so as to prevent disclosure of an individual's name, address and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated.

(f) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(g) The contractor or subcontractor shall have 10 days in which to comply subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall,

as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars ($25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

The penalties specified in subdivision (g) of Labor Code Section 1776 for noncompliance with the requirements in Section 1776 may be deducted from any moneys due or which may become due to the Contractor.

A copy of all payrolls shall be submitted weekly to the Engineer. Payrolls shall contain the full name, address and social security number of each employee, the employee's correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employee's address and social security number need only appear on the first payroll on which that name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or the employer's agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the contract. The "Statement of Compliance" shall be on forms furnished by the Department or on any form with identical wording. The Contractor shall be responsible for the submission of copies of payrolls of all subcontractors.

If by the 15th of the month, the Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the first of that month, the Department will retain an amount equal to 10 percent of the estimated value of the work performed (exclusive of Mobilization) during the month from the next monthly estimate, except that this retention shall not exceed $10,000 nor be less than $1,000. Retentions for failure to submit satisfactory payrolls shall be additional to all other retentions provided for in the contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

The Contractor and each subcontractor shall preserve their payroll records for a period of 3 years from the date of completion of the contract.

7-1.01A(4) Labor Nondiscrimination. Attention is directed to Section 1735 of the Labor Code, which reads as follows:

"No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter."

Attention is directed to the following "Nondiscrimination Clause" that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

"NONDISCRIMINATION CLAUSE

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

2. This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE, SECTION 12990).

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of $5,000, or more.

1. As used in the specifications:

a. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;

b. "Minority" includes:

(i) Black (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);

(ii) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);

(iii) Asian / Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and

(iv) American Indian / Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).

2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of $5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.

3. The contractor shall implement the specific nondiscrimination standards provided in paragraph 6(a) through (e) of these specifications.

4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.

5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.

6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.

d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities
accordingly.

e. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.

7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations.

The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's.

8. The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.

9. Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104 (b) of this Chapter shall create a rebuttal presumption that a contractor is in compliance with the requirements of Section 12990 of the Government Code and its implementing regulations.

10. The Contractor shall not use the nondiscrimination standards to discriminate against any person because of race, color, religion, sex, national origin, ancestry, physical handicap, medical condition, marital status or age over 40.

11. The Contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code Section 12990.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code Section 12990.

13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name,

address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records. NOTE: Authority cited: Sections 12935(a) and 12990(d), Government Code. References: Section 12990, Government Code."

7-1.01A(5) Apprentices. Attention is directed to Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code and Title 8, California Code of Regulations Section 200 et seq. To ensure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each contractor or subcontractor should, where some question exists, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, CA 94102, or one of its branch offices prior to commencement of work on the public works contract. Responsibility for compliance with this section lies with the Contractor.

It is State policy to encourage the employment and training of apprentices on public works contracts as may be permitted under local apprenticeship standards.

7-1.01A(6) Workers' Compensation. Pursuant to the requirements in Section 1860 of the Labor Code, the Contractor will be required to secure the payment of workers' compensation to the Contractor's employees in conformance with the requirements in Section 3700 of the Labor Code.

Prior to the commencement of work, the Contractor shall sign and file with the Engineer a certification in the following form:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

This certification is included in the contract, and signature and return of the contract shall constitute signing and filing of the certificate.

7-1.01A(7) Suits to Recover Penalties and Forfeitures. Attention is directed to Sections 1730 to 1733, inclusive, of the Labor Code concerning suits to recover amounts withheld from payment for failure to comply with requirements of the Labor Code or contract provisions based on those laws.

Those sections provide that a suit on the contract for alleged breach thereof in not making the payment is the exclusive remedy of the Contractor or the Contractor's assignees with reference to amounts withheld for those penalties or forfeitures; and that the suit must be commenced and actual notice thereof received by the awarding authority prior to 90 days after completion of the contract and the formal acceptance of the job.

Submission of a claim under Section 50-16, "Claims for Adjustment and Disputes," for the amounts withheld from payment for those penalties and forfeitures is not a prerequisite for those suits, and these claims will not be considered.

7-1.01B Fair Labor Standards Act. The attention of bidders is invited to the fact that the State of California, Department of Transportation, has been advised by the Wage and Hour Division, U.S. Department of Labor, that contractors engaged in highway construction work are required to meet the provisions of the Fair Labor Standards Act of 1938 and as amended (52 Stat. 1060).

7-1.01C Contractor's Licensing Laws. Attention is directed to the provisions of Chapter 9 of Division 3 of the Business and Professions Code concerning the licensing of contractors.

All bidders and contractors shall be licensed in accordance with the laws of this State and any bidder or contractor not so licensed is subject to the penalties imposed by those laws.

Attention is also directed to the requirements in Public Contract Code Section 10164. In all projects where Federal funds are involved, the Contractor shall be properly licensed at the time the contract is awarded.

7-1.01D Vehicle Code. Pursuant to the authority contained in Vehicle Code Section 591, the Department has determined that within those areas that are within the limits of the project and are open to public traffic, the Contractor shall comply with all the requirements set forth in Divisions 11, 12, 13, 14 and 15 of the Vehicle Code.

Attention is directed to the statement in Vehicle Code Section 591 that this section shall not relieve the Contractor or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of the Contractor's equipment and the protection of the public from injury and damage from the Contractor's equipment.

7-1.01E Trench Safety. Attention is directed to the requirements in Section 6705 of the Labor Code concerning trench excavation safety plans.

7-1.01F Air Pollution Control. The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules,

regulations, ordinances and statutes, specified in Section 11017 of the Government Code.

Unless otherwise provided in the special provisions, material to be disposed of shall not be burned, either inside or outside the highway right of way.

7-1.01G Water Pollution. The Contractor shall exercise every reasonable precaution to protect streams, lakes, reservoirs, bays, and coastal waters from pollution with fuels, oils, bitumens, calcium chloride and other harmful materials and shall conduct and schedule operations so as to avoid or minimize muddying and silting of streams, lakes, reservoirs, bays and coastal waters. Care shall be exercised to preserve roadside vegetation beyond the limits of construction.

Water pollution control work is intended to provide prevention, control and abatement of water pollution to streams, waterways and other bodies of water, and shall consist of constructing those facilities which may be shown on the plans, specified herein or in the special provisions, or directed by the Engineer.

In order to provide effective and continuous control of water pollution it may be necessary for the Contractor to perform the contract work in small or multiple units, on an out of phase schedule, and with modified construction procedures. The Contractor shall provide temporary water pollution control measures, including but not limited to, dikes, basins, ditches, and applying straw and seed, which become necessary as a result of the Contractor's operations. The Contractor shall coordinate water pollution control work with all other work done on the contract.

Before starting any work on the project, the Contractor shall submit, for acceptance by the Engineer, a program to control water pollution effectively during construction of the project. The program shall show the schedule for the erosion control work included in the contract and for all water pollution control measures which the Contractor proposes to take in connection with construction of the project to minimize the effects of the operations upon adjacent streams and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Engineer, until the program has been accepted.

If the measures being taken by the Contractor are inadequate to control water pollution effectively, the Engineer may direct the Contractor to revise the operations and the water pollution control program. The directions will be in writing and will specify the items of work for which the Contractor's water pollution control measures are inadequate. No further work shall be performed on those items until the water pollution control measures are adequate and, if also required, a revised water pollution control program has been accepted.

The Engineer will notify the Contractor of the acceptance or rejection of any submitted or revised water pollution control program in not more than 5 working days.

The State will not be liable to the Contractor for failure to accept all or any portion of an originally submitted or revised water pollution control program, nor for any delays to the work due to the Contractor's failure to submit an acceptable water pollution control program.

The Contractor may request the Engineer to waive the requirement for submission of a written program for control of water pollution when the nature of the Contractor's operation is such that erosion is not likely to occur. Waiver of this requirement will not relieve the Contractor from responsibility for compliance with the other provisions of this section. Waiver of the requirement for a written program for control of water pollution will not preclude requiring submittal of a written program at a later time if the Engineer deems it necessary because of the effect of the Contractor's operations.

Unless otherwise approved by the Engineer in writing, the Contractor shall not expose a total area of erosible earth material, which may cause water pollution, exceeding 750,000 square feet for each separate location, operation or spread of equipment before either temporary or permanent erosion control measures are accomplished.

Where erosion which will cause water pollution is probable due to the nature of the material or the season of the year, the Contractor's operations shall be so scheduled that permanent erosion control features will be installed concurrently with or immediately following grading operations.

Nothing in the terms of the contract nor in the provisions in this Section 7-1.01G shall relieve the Contractor of the responsibility for compliance with Sections 5650 and 12015 of the Fish and Game Code, or other applicable statutes relating to prevention or abatement of water pollution.

When borrow material is obtained from other than commercially operated sources, erosion of the borrow site during and after completion of the work shall not result in water pollution. The material source shall be finished, where practicable, so that water will not collect or stand therein.

The requirements of this section shall apply to all work performed under the contract and to all non-commercially operated borrow or disposal sites used for the project.

The Contractor shall also conform to the following provisions:

1. Where working areas encroach on live streams, barriers adequate to prevent the flow of muddy water into streams shall be constructed and maintained between working areas and streams, and during construction of the barriers, muddying of streams shall be held to a minimum.

2. Removal of material from beneath a flowing stream shall not be commenced until adequate means, such as a bypass channel, are provided to carry the stream free from mud or silt around the removal operations.

3. Should the Contractor's operations require transportation of materials across live streams, the operations shall be conducted without muddying the stream. Mechanized equipment shall not be operated in the stream channels of the live streams except as may be necessary to construct crossings or barriers and fills at channel changes.

4. Water containing mud or silt from aggregate washing or other operations shall be treated by filtration, or retention in a settling pond, or ponds, adequate to prevent muddy water from entering live streams.

5. Oily or greasy substances originating from the Contractor's operations shall not be allowed to enter or be placed where they will later enter a live stream.

6. Portland cement or fresh portland cement concrete shall not be allowed to enter flowing water of streams.

7. When operations are completed, the flow of streams shall be returned as nearly as possible to a meandering thread without creating possible future bank erosion, and settling pond sites shall be graded so they will drain and will blend in with the surrounding terrain.

8. Material derived from roadway work shall not be deposited in a live stream channel where it could be washed away by high stream flows.

9. Where there is possible migration of anadromous fish in streams affected by construction on the project, the Contractor shall conduct work operations so as to allow free passage of the migratory fish.

Compliance with the provisions in this section shall in no way relieve the Contractor from the responsibility to comply with the other provisions of the contract, in particular the responsibility for damage and for preservation of property.

Full compensation for conforming to the provisions in this section shall be considered as included in the prices paid for the various items of work and no additional compensation will be allowed therefor.

7-1.01H Use of Pesticides. The Contractor shall comply with all rules and regulations of the Department of Food and Agriculture, the Department of Health, the Department of Industrial Relations and all other agencies which govern the use of pesticides required in the performance of the work on the contract.

Pesticides shall include but shall not be limited to herbicides, insecticides, fungicides, rodenticides, germicides, nematocides, bactericides, inhibitors, fumigants, defoliants, desiccants, soil sterilants and repellents.

Any substance or mixture of substances intended for preventing, repelling, mitigating, or destroying weeds, insects, diseases, rodents, or nematodes and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant shall be considered a pesticide.

7-1.01I Sound Control Requirements. The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

7-1.01J Assignment of Antitrust Actions. The Contractor's attention is directed to the following requirements in Public Contract Code 7103.5 and Government Code Sections 4553 and 4554, which shall be applicable to the Contractor and the Contractor's subcontractors:

> "In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.
>
> "If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.
>
> "Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action."

7-1.02 LOAD LIMITATIONS. Not used.

7-1.03 PAYMENT OF TAXES. The contract prices paid for the work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State or local government, including, without being limited to, Federal excise tax. No tax exemption certificate nor any document designed to exempt the Contractor from payment of any tax will be furnished to the Contractor by the Department, as to any tax on labor, services, materials, transportation, or any other items furnished pursuant to the contract.

7-1.04 PERMITS AND LICENSES. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work.

The Environmental Quality Act (Public Resources Code, Sections 21000 to 21176, inclusive) may be applicable to permits, licenses and other authorizations which the Contractor must obtain from local agencies in connection with performing the work of the contract. The Contractor shall comply with the
provisions of those statutes in obtaining the permits, licenses and other authorizations and they shall be obtained in sufficient time to prevent delays to the work.

In the event that the Department has obtained permits, licenses or other authorizations, applicable to the work, in conformance with the requirements in the Environmental Quality Act, the Contractor shall comply with the provisions of those permits, licenses and other authorizations.

7-1.05 PATENTS. The Contractor shall assume all costs arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work, and agrees to indemnify and save harmless the State of California, the Director, the Engineer, and their duly authorized representatives, from all suits at law, or actions of every nature for, or on account of the use of any patented materials, equipment, devices or processes.

7-1.06 SAFETY AND HEALTH PROVISIONS. The Contractor shall conform to all applicable occupational safety and health standards, rules, regulations and orders established by the State of California. Working areas utilized by the Contractor to perform work during the hours of darkness, shall be lighted to conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders.

All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic.

Full compensation for conforming to the provisions in this section shall be considered as included in the contract prices paid for the various items of work involved and no separate payment will be made therefor.

7-1.07 (BLANK)

7-1.08 PUBLIC CONVENIENCE. This Section 7-1.08 defines the Contractor's responsibility with regard to convenience of the public and public traffic in connection with the Contractor's operations.

Attention is directed to Section 7-1.09, "Public Safety," for provisions relating to the Contractor's responsibility for the safety of the public. The provisions in Section 7-1.09 are in addition to the provisions in this Section 7-1.08, and the Contractor will not be relieved of the responsibilities as set forth in Section 7-1.09 by reason of conformance with any of the provisions in this Section 7-1.08.

The Contractor shall so conduct operations as to offer the least possible obstruction and inconvenience to the public and shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public.

Unless otherwise provided in the special provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. Where possible, public traffic shall be routed on new or existing paved surfaces.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at the Contractor's expense.

Existing traffic signals and highway lighting shall be kept in operation for the benefit of the traveling public during progress of the work, and other forces will continue routine maintenance of existing systems.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners.

Convenient access to driveways, houses, and buildings along the line of the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition. When the abutting property owner's access across the right of way line is to be eliminated, or to be replaced under the contract by other access facilities, the existing access shall not be closed until the replacement access facilities are usable.

Roadway excavation and the construction of embankments shall be conducted in such a manner as to provide a reasonably smooth and even surface satisfactory for use by public traffic at all times; sufficient fill at culverts and bridges to permit traffic to cross shall be placed in advance of other grading operations; and if ordered by the Engineer roadway cuts shall be excavated in lifts and embankments constructed part width at a time, construction being alternated from one side to the other and traffic routed over the side opposite the one under construction. Culvert installation or culvert construction shall be conducted on but one-half the width of the traveled way at a time, and that portion of the traveled way being used by public traffic shall be kept open and unobstructed until the opposite side of the traveled way is ready for use by traffic.

Upon completion of rough grading at the grading plane, or placing any subsequent layer thereon, the surface of the roadbed shall be brought to a smooth, even condition free of humps and depressions, satisfactory for the use of public traffic.

After the surface of the roadbed has been brought to a smooth and even condition for the passage of public traffic as above provided, any work ordered by the Engineer for the accommodation of public traffic prior to commencing subgrade operations will be paid for as extra work as provided in the provision set forth in this Contract. After subgrade preparation for a specified layer of material has been completed, the Contractor shall, at the Contractor's expense, repair any damage to the roadbed or completed subgrade, including damage caused by the Contractor's operations or use by public traffic.

While subgrade and paving operations are underway, public traffic shall be permitted to use the shoulders and, if half-width paving methods are used, shall also be permitted to use the side of the roadbed opposite the one under construction. When sufficient width is available, a passageway wide enough to accommodate at least 2 lanes of traffic shall be kept open at locations where subgrade and paving operations are in active progress. Any shaping of shoulders or reshaping of subgrade necessary for the accommodation of public traffic thereon during subgrade preparation and paving operations will be paid for as extra work as provided in the provisions set forth in this Contract.

When ordered by the Engineer, the Contractor shall furnish a pilot car and driver and flaggers for the purpose of expediting the passage of public traffic through the work under one-way controls, and the cost thereof will be paid for as extra work as provided in the provisions set forth in this Contract. At locations where traffic is being routed through construction under one-way controls and when ordered by the Engineer, the movement of the Contractor's equipment from one portion of the work to another shall be governed in accordance with the one-way controls.

Water or dust palliative shall be applied if ordered by the Engineer for the alleviation or prevention of dust nuisance as provided in the provisions set forth in this Contract.

In order to expedite the passage of public traffic through or around the work and where ordered by the Engineer, the Contractor shall install signs, lights, flares, temporary railing (Type K), barricades and other facilities for the sole convenience and direction of public traffic. Also where directed by the Engineer, the Contractor shall furnish competent flaggers whose sole duties shall consist of directing the movement of public traffic through or around the work. The cost of furnishing and installing the signs, lights, flares, temporary railing (Type K), barricades, and other facilities, not to be paid for as separate contract items, will be paid for as extra work as provided in the provisions set forth in this Contract.

The cost of furnishing flaggers for the sole convenience and direction of public traffic will be paid for as provided in the provisions set forth in this Contract.

The Contractor will be required to pay the cost of replacing or repairing all facilities installed under extra work for the convenience or direction or warning of public traffic that are lost while in the Contractor's custody, or are damaged by reason of the Contractor's operations to such an extent as to require replacement or repair, and deductions from any moneys due or to become due the Contractor will be made to cover the cost.

Whenever a section of surfacing, pavement or the deck of a structure has been completed, the Contractor shall open it to use by public traffic if the Engineer so orders or may open it to use by public traffic if the Engineer so consents. In either case the Contractor will not be allowed any compensation due to any delay, hindrance or inconvenience to the Contractor's operations caused by public traffic, but will thereupon be relieved of responsibility for damage to completed permanent facilities caused by public traffic, within the limits of that use. The Contractor will not be relieved of any other responsibility under the contract nor will the Contractor be relieved of cleanup and finishing operations.

Except as otherwise provided in this Section 7-1.08 or in the special provisions, full compensation for conforming to the provisions in this Section 7-1.08 shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

7-1.09 PUBLIC SAFETY. It is the Contractor's responsibility to provide for the safety of traffic and the public during construction.

Attention is directed to Section 7-1.12, "Idemnification and Insurance."

Attention is directed to Section 7-1.08, "Public Convenience," for provisions relating to the Contractor's responsibility for providing for the convenience of the public in connection with the Contractor's operations.

Whenever the Contractor's operations create a condition hazardous to traffic or to the public, the Contractor shall, at the Contractor's expense and without cost to the State, furnish, erect and maintain those fences, temporary railing (Type K), barricades, lights, signs and other devices and take such other protective measures that are necessary to prevent accidents or damage or injury to the public.

The Contractor shall also furnish such flaggers as are necessary to give adequate warning to traffic or to the public of any dangerous conditions to be encountered, and payment therefor will be made as provided in the provisions set forth in this Contract.

Signs, lights, flags, and other warning and safety devices and their use shall conform to the requirements set forth in Part 6 of the MUTCD and of the MUTCD California Supplement. Signs or other protective devices furnished and erected by the Contractor, at the Contractor's expense, as above provided, shall not obscure the visibility of, nor conflict in intent, meaning and function of either existing signs, lights and traffic control devices or any construction area signs and traffic control devices for which furnishing of, or payment for, is provided elsewhere in the specifications. Signs

furnished and erected by the Contractor, at the Contractor's expense, shall be approved by the Engineer as to size, wording and location.

The installation of general roadway illumination shall not relieve the Contractor of the responsibility for furnishing and maintaining any of the protective facilities herein before specified.

Construction equipment shall enter and leave the highway via existing ramps and crossovers and shall move in the direction of public traffic. All movements of workmen and construction equipment on or across lanes open to public traffic shall be performed in a manner that will not endanger public traffic.

The Contractor's trucks or other mobile equipment which leave a freeway lane, that is open to public traffic, to enter the construction area, shall slow down gradually in advance of the location of the turnoff to give following public traffic an opportunity to slow down.

When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

No material or equipment shall be stored where it will interfere with the free and safe passage of public traffic, and at the end of each day's work and at other times when construction operations are suspended for any reason, the Contractor shall remove all equipment and other obstructions from that portion of the roadway open for use by public traffic.

Temporary facilities which the Contractor uses to perform the work shall not be installed or placed where they will interfere with the free and safe passage of public traffic.

Temporary facilities which could be a hazard to public safety if improperly designed shall comply with design requirements specified in the contract for those facilities or, if none are specified, with standard design criteria or codes appropriate for the facility involved. Working drawings and design calculations for the temporary facilities shall be prepared and signed by an engineer who is registered as a Civil Engineer in the State of California and shall be submitted to the Engineer for approval pursuant to the provisions set forth in this Contract. The submittals shall designate thereon the standard design criteria or codes used. Installation of the temporary facilities shall not start until the Engineer has reviewed and approved the drawings.

Should the Contractor appear to be neglectful or negligent in furnishing warning devices and taking protective measures as above provided, the Engineer may direct attention to the existence of a hazard and the necessary warning devices shall be furnished and installed and protective measures taken by the Contractor at the Contractor's expense. Should the Engineer point out the inadequacy of warning devices and protective measures, that action on the part of the Engineer shall not relieve the

Contractor from responsibility for public safety or abrogate the obligation to furnish and pay for these devices and measures.

Provision for the payment for signs, lights, flares, temporary railing (Type K), barricades, and other facilities by extra work as provided in Section 7-1.08, "Public Convenience," or by contract item as provided in the provisions set forth in this Contract shall in nowise relieve the Contractor from the responsibility as provided in this Section 7-1.09.

Except as otherwise provided in this Section 7-1.09 or in the special provisions, full compensation for conforming to all of the provisions in this Section 7-1.09 shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

7-1.10 USE OF EXPLOSIVES. When explosives are used, the Contractor shall exercise the utmost care not to endanger life or property.

In advance of doing any blasting work within 200 feet of any railroad's tracks or structures, the Contractor shall notify the railroad of the location, date, time and approximate duration of the blasting operations.

7-1.11 PRESERVATION OF PROPERTY. Due care shall be exercised to avoid injury to existing highway improvements or facilities, utility facilities, adjacent property, and roadside trees, shrubs and other plants that are not to be removed.

Roadside trees, shrubs and other plants that are not to be removed, and pole lines, fences, signs, markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and water lines, all highway facilities and any other improvements or facilities within or adjacent to the highway shall be protected from injury or damage, and if ordered by the Engineer, the Contractor shall provide and install suitable safeguards, approved by the Engineer, to protect the objects from injury or damage. If the objects are injured or damaged by reason of the Contractor's operations, the objects shall be replaced or restored at the Contractor's expense. The facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the work, or as good as required by the specifications accompanying the contract, if any of the objects are a part of the work being performed under the contract. The Engineer may make or cause to be made those temporary repairs that are necessary to restore to service any damaged highway facility. The cost of the repairs shall be borne by the Contractor and may be deducted from any moneys due or to become due to the Contractor under the contract.

It shall be the Contractor's responsibility, pursuant to the provisions set forth in this Contract, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in

this Section 7-1.11, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

7-2.01 Contractor recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code of the State of California. By entering into the contract Contractor acknowledges that to the best of its knowledge Contractor is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the Employment Development Department.

70-23 California State Department of Industrial Relations (DIR) requirements:

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

70-24 Required workplace posters. Contractor shall provide and post on the project site any and all notification posters for public works projects, as required by the State of California and Federal Government. All penalties or fines shall be the responsibility of the Contractor.

CONTRACTOR'S DBE PLAN

(Submit this form and attach one DBE Letter of Intent Form for each DBE subcontractor, supplier or manufacturer.)

Airport Name: Nevada County Airport

Project Name: Perimeter Fence and Gate System Upgrades Project

FAA AIP Project No: 3-06-0095-017-2015-D

Total Awarded Contract Amount: $_____

Name of Bidder's Firm: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Printed name of signer: _____

Printed title of signer: _____

DBE UTILIZATION SUMMARY

	DBE Contract Amount		DBE Value	Contract %
DBE Prime Contractor	$_____	x 1.00 =	$_____	_____%
DBE Subcontractors	$_____	x 1.00 =	$_____	_____%
DBE Suppliers	$_____	x 0.60 =	$_____	_____%
DBE Manufacturers	$_____	x 1.00 =	$_____	_____%
* Total Proposed DBE Participation			$_____	_____%
Established DBE Goal			$_____	_____%

* If the total proposed DBE participation is less than the established DBE goal, Bidder must provide written documentation of the good faith efforts as required by 49 CFR Part 26.

Affirmation:

The undersigned hereby assures that the information included herein is true and correct, and that the DBE firm(s) listed on the attached DBE Letter of Intent Forms have agreed to perform a commercially useful function in the work items noted for each firm. The undersigned further understands that no changes to this plan may be made without prior approval from the Civil Rights Staff of the Federal Aviation Administration.

By: _____

(Signature of Bidder's representative) (Title)

DBE LETTER OF INTENT FORM

(Submit one form for each DBE subcontractor, supplier or manufacturer.)

Project Name/Location: Perimeter Fence and Gate System Upgrades Project / Nevada County Airport

FAA AIP Project No: 3-06-0251-0095-017-2015-D

Name of Bidder's Firm: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Contact Person: _____ Telephone: _____

Certifying Agency: _____ Expiration Date: _____

(DBE firm shall submit evidence, such as a photocopy, of their certification status)

Classification: ☐ Prime Contractor ☐ Subcontractor ☐ Joint Venture
☐ Manufacturer ☐ Supplier

Disadvantaged Group (check one):

Black American ☐	Hispanic American ☐	Native American ☐	Subcont. Asian American ☐
Male ☐	Male ☐	Male ☐	Male ☐
Female ☐	Female ☐	Female ☐	Female ☐
Asian Pacific American ☐	Non-Minority ☐	Other (not of any group listed here) ☐	
Male ☐	Male ☐	Male ☐	
Female ☐	Female ☐	Female ☐	

SUMMARY OF WORK ITEMS

Work Item(s)	Description of Work Item	Estimated Quantity	Total Value

The bidder is committed to utilizing the above-named DBE firm for the work described above. The estimated dollar value of this work is $ _____.

Affirmation:

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____
(Signature of DBE firm's representative) (Title)

If the bidder does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

DISADVANTAGED BUSINESS ENTERPRISE
DBE PARTICIPATION SUMMARY
(Submit one form for each DBE Firm.)

Airport Name _____

Contractor Name: _____

Address: _____

City: _____ State: _____ Zip: _____

DBE Firm DBE Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

DBE Contact Person Name: _____ Phone: _____

DBE Certification Agency: _____ Expiration Date: _____

Each DBE Firm shall submit evidence (such as a photocopy) of their certification status.

DBE Commitments/Awards -Breakdown By Ethnicity & Gender

- ☐ Black American
- ☐ Hispanic American
- ☐ Native American
- ☐ Subcontinent Asian American
- ☐ Asian-Pacific American
- ☐ Non-Minority Women
- ☐ Other (i.e. not of any group listed here)

Classification:

- ☐ Prime Contractor
- ☐ Manufacturer
- ☐ Subcontractor
- ☐ Supplier
- ☐ Joint Venture

Work items performed by DBE	Description	Quantity	Amount Paid to DBE

The Contractor utilized the above-named DBE Firm for the work items described above.
The actual participation is as follows:

Total amount paid to DBE Firm: $ _____

Percent of Contractor's total contract: _____ %

Affirmation:
The above-named DBE Firm affirms that it has performed the work items described above and has been paid the amount stated above.

By: _____
(Signature) *(Title)*

MONTHLY DBE REPORT

Airport Name: _____

Project Name: _____

FAA AIP Project No.: _____

Name of Contractor's Firm: _____

DBE Firm	Status This Report	Total DBE Contract Amount	Payments this Period	Previous Payments	Total DBE Payments To Date

_____ _____

Signature of Contractor's Representative Date

Equal Employment Opportunity is
THE LAW

Private Employers, State and Local Governments, Educational Institutions, Employment Agencies and Labor Organizations

Applicants to and employees of most private employers, state and local governments, educational institutions, Employment agencies, and labor organizations are protected under Federal law from discrimination on the following bases.

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN
Title VII of the Civil Rights Act of 1964, as amended, protects applicants and employees from discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex (including pregnancy), or national origin. Religious discrimination includes failing to reasonably accommodate an employee's religious practices where the accommodation does not impose undue hardship.

DISABILITIES
Title I and Title V of the Americans with Disabilities Act of 1990, as amended, protect qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who's is an applicant or employee, barring undue hardship.

AGE
The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination based on age in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment.

SEX (WAGES)
In addition to sex discrimination prohibited by Title VII of the Civil Rights Act, as amended, the Equal Pay Act of 1963, as amended, prohibits sex discrimination in payment of wages to women and men performing substantially equal work jobs that require equal skill, effort, and responsibility, under similar working conditions, in the same establishment.

GENETICS
Title II of the Genetic Information Nondiscrimination Act of 2008 protects applicants and employees from discrimination based on genetic information in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. GINA also restricts employers' acquisition of genetic information and strictly limits disclosure of genetic information. Genetic information includes information about genetic tests of applicants, employees, or their family members; the manifestation of diseases or disorders in family members (family medical history); and requests for or receipt of genetic services by applicants, employees, or their family members.

RETALIATION
All of these Federal laws prohibit covered entities from retaliating against a person who files a charge of discrimination, participates in a discrimination proceeding, or otherwise opposes an unlawful employment practice.

WHAT TO DO IF YOU BELIEVE DISCRIMINATION HAS OCCURRED
There are strict time limits for filing charges of employment discrimination. To preserve the ability of EEOC to act on your behalf and to protect your right to file a private lawsuit, should you ultimately need to, you should contact EEOC promptly when discrimination is suspected:
The U.S. Equal Employment Opportunity Commission (EEOC), 1-800-669-4000 (toll-free) or 1-800-669-6820 (toll-free TTY number for individuals with hearing empairments). EEOC field office information is available at www.eeoc.gov or in most telephone directories in the U.S. Government or Federal Government section. Additional information about EEOC, including information about charge filing, is available at www.eeoc.gov.

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract, are protected under Federal law from discrimination on the following bases.

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN
Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

INDIVIDUALS WITH DISABILITIES
Section 503 of the Rehabilitation Act of 1973, as amended, protects qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified employee, barring undue hardship. Section 503 also requires that Federal contractors take affirmative action to employ and advance in employment qualified individuals with disabilities at all levels of employment, including the executive level.

DISABLED, RECENTLY SEPARATED, OTHER PROTECTED, AND ARMED FORCES SERVICE MEDAL VETERANS
The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212, prohibits job discrimination and requires affirmative action to employ and advance in employment disabled veterans, recently separated veterans (within three years of discharge or release from active duty), other protected veterans (veterans who served during a war or in a campaign or expedition for which a campaign badge has been authorized), and Armed Forces service medal veterans (veterans who, while on active duty, participated in a U.S. military operation for which an Armed Forces service medal was awarded).

RETALIATION
Retaliation is prohibited against a person who files a complaint of discrimination, participates in an OFCCP proceeding, or otherwise opposes discrimination under these Federal laws.

Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately:

The Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210, 1-800-397-6251 (toll-free) or (202) 693-1337 (TTY). OFCCP may also be contacted by e-mail at OFCCP-Public@dol.gov, or by calling an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, NATIONAL ORIGIN, SEX
In addition to the protections of Title VII of the Civil Rights Act of 1964, as amended, Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination on the basis of race, color or national origin in programs or activities receiving Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal financial assistance.

INDIVIDUALS WITH DISABILITIES
Section 504 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance. Discrimination is prohibited in all aspects of employment against persons with disabilities who, with or without reasonable accommodation, can perform the essential functions of the job.

If you believe you have been discriminated against in a program of any institution which receives Federal financial assistance, you should immediately contact the Federal agency providing such assistance.

FEDERAL WAGE RATES

The applicable Federal Wage Rates in effect at the time of advertisement are:

Nevada County – Highway - General Decision Number: CA160009 03/04/2016 CA9

STATE WAGE RATES

Pursuant to Sections 1770 and 1773 of the Labor Code of the State of California, the County of Nevada has ascertained that prevailing wage rates are applicable to the work to be done and are available at the State of California Department of Industrial Relations website http://www.dir.ca.gov/dlsr/PWD/index.htm.

Contractor shall not pay less than the prevailing rate of wages for federal and state wages, whichever is higher.

200-08 Special Provisions to Section 80.

Additions after the end of the first paragraph of Section 80-01 Subletting of contract.

All Subcontractors shall be approved by the Owner prior to being utilized on the project. The Subcontractor shall submit a Subcontractor Approval Request to the Engineer fourteen (14) days prior to beginning work on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

In the first sentence of Section 80-02 Notice to proceed, after "The notice to proceed", INSERT the following, "will be issued by the Owner".

Additions after the end of the first paragraph of Section 80-03 Execution and progress.

The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

In the first sentence of the third paragraph of Section 80-03 Execution and progress, after "shall not commence any actual construction", INSERT the following, "activities".

Additions to the end of the first paragraph of Section 80-04.1 Operational safety on airport during construction.

The Safety Plan Compliance Document (SPCD) can be found in Appendix 3 of the CSPP.

Additions to the end of the fourth paragraph of Section 80-04.1 Operational safety on airport during construction.

If the requested changes are acceptable to all the aforementioned parties, the Engineer will request a modification to the CSPP from the FAA. The Contractor shall plan on a minimum of 90 days for this process to be completed. No deviation to the original CSPP shall be made without FAA approval.

In Section 80-07 Determination and extension of contract time, DELETE a. (1) in its entirety and INSERT the following

(1) No time shall be charged for days on which the Contractor is unable to proceed with work on the items under construction at the time with the normal work force employed on such items. Such days on which the Contractor chooses to engage in work which require the presence of an inspector will be charged against contract time. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

In Section 80-07 Determination and extension of contract time, DELETE a. (2) in its entirety and INSERT the following

(2) The Engineer will begin charges against the contract time on the date stated in the notice to proceed.

Additions after the second sentence of the first paragraph of 80-11 Work area, storage area and sequence of operations.

During the work of this Contract, the Owner will make such arrangements to coordinate aircraft movements and Airport operations as necessary to conform to the construction procedures outlined in the Construction Safety and Phasing Plan, and as shown on the Contract Drawings. The Contractor shall give adequate notice to the Engineer, so as to afford time to coordinate construction with the Owner.

In the fourth sentence of the first paragraph of Section 80-11 Work area, storage area and sequence of operations, after "material stockpiles shall be stored", INSERT, "at locations determined during construction such that they do not interfere with", and after "an active runway", INSERT, "or taxiway".

200-09 Special Provisions to Section 90.

Additions after the end of the first paragraph of Section 90-05 Payment for extra work.

1. **Agreed Price/Time and Materials Work.** All agreed price and time and materials work shall be approved by the Owner and the FAA prior to proceeding with the work. The Engineer and Contractor shall be responsible for tracking the number of employees, number of hours and classification of each employee, numbers of hours that equipment is utilized and materials utilized for the extra work that is paid utilizing time and materials work.

   a. **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

   b. **Comparison of Record.** The Contractor and the Engineer shall compare records of the cost of agreed price/time and materials work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.

   c. **Statement.** No payment will be made for work performed on a agreed price/time and materials basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such agreed price/time and materials work detailed as follows:

      (1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.

      (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.

         (a) Contractor Owned Equipment Trucks and Plant.- Contractor shall be reimbursed for its ownership costs and for its operating costs for self owned equipment at the rates listed in the Rental Rate Blue Book published by Dataquest, Inc. applied in the following manner as modified by the "Rate Adjustment Table":

            (i) Ownership Costs -- It is mutually understood that the rates for ownership costs reimburse the Contractor for all non-operating costs of owning the equipment, truck or plant including depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, overhead, repairs, moving the equipment onto and away from the project or work site, and profit. Reimbursement will be made for the hours of actual use as described below.

(ii) Less than 8 hours of actual use, the product of the actual number of hours used or fraction thereof multiplied by the hourly rate, or the daily rate, whichever is less.

(iii) Between 8 hours and 40 hours of actual use, the product of the actual number of hours used divided by 8 multiplied by the daily rate, or the weekly rate, whichever is less.

(iv) Between 40 and 176 hours of actual use, the product of the actual number of hours used divided by 40 multiplied by the weekly rate, or the monthly rate, whichever is less.

(v) Over 176 hours of actual use, the product of the actual number of hours used divided by 176 multiplied by the monthly rate.

(vi) Operating Costs -- The rate for operating costs includes fuel, lubricants, other operating expendables, and preventative and field maintenance. Operating cost does not include the operator's wages. The Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the Estimated Operating Cost/Hour.

(vii) The rates used shall be those in effect at the time the agreed price/time and materials work is done as reflected in the then current publication of the Rental Rate Blue Book. When agreed price/time and materials type analysis are used to establish agreed prices in accordance with paragraph A above, the rates used shall be those in effect when the agreed price is developed by the Contractor.

(viii) In the event that a rate is not established in the Rental Rate Blue Book for a particular piece of equipment, truck or plant, the Engineer shall establish rates for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.

(b) Rented Equipment, Trucks and Plant –

(i) In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, it shall be paid the actual rental rate for the equipment for the time that the equipment is used to accomplish the work or is required by the Engineer to be present, not to exceed the adjusted rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the project site.

(ii) The Contractor shall also be reimbursed for the operating cost of the equipment unless reflected in the rental price. Such operating

cost shall be determined in the same manner as specified for Contractor Owned Equipment above.

(iii) In the event that area practice dictates the rental of equipment with an operator or fully fueled and maintained equipment, truck or plants, paymen1t will be made on the basis of an invoice for the rental of the equipment with an operator, fully fueled and/or maintained equipment, trucks or plants including all costs incidental to its use, including costs of moving to and from the site, provided the rated is substantiated by area practice.

(c) Maximum Amount Payable -- The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant for any agreed price/time and materials work as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the operating Cost/Hour for each hour of actual use.

(3) Quantities of materials, prices, and extensions.

(4) Transportation of materials.

(5) Overhead and Profit. If any of the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work computed as outlined in a through d above, or on such other basis as may be approved by the Owner. Subcontractor profit and overhead shall be paid as outlined in this section, plus an additional allowance of five percent (5%) of materials and direct labor to cover the Contractor's profit, superintendence, administration, insurance and other overhead. For the purposes of computing overhead and profit, only one level or tier of subcontractors will be allowed.

Overhead shall be defined to include, but not be limited to:

- premium on bonds;
- premium on insurance required by workman's compensation insurance, public liability and property damage insurance, unemployment insurance, social security tax, and other payroll taxes and such reasonable charges that are paid by the Contractor pursuant to written agreement with his/her employee;
- all salary and expenses of executive officers, supervising officers or supervising employees;
- all clerical or stenographic employees;
- all charges for minor equipment, such as small tools, including shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, etc. and other miscellaneous supplies and services;

- all drafting room accessories such as paper, tracing cloth, blueprinting, etc.

Overhead and profit cost shall be computed at 20 percent of the following:

- Total Direct Labor Cost (actual hours worked multiplied by the basic hourly wage rate) plus supplemental benefits payments, payroll taxes, insurance payments and other labor related fringe benefit payments as defined in 'a' above, but not including the overtime additive payments. Overhead and profit shall not be paid on the premium portion of overtime.

- Total Cost of Materials as defined in c and d above.

Additions to the end of the first paragraph of Section 90-06 Partial payments.

No partial payments will be made for work items lacking approved submittals, or lacking acceptable manufacturer's material certifications.

Additions to the end of the second paragraph of Section 90-06 Partial payments.

Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Airport Sponsor. This clause applies to both DBE and non-DBE subcontractors.

Contractors shall include in their subcontracts language providing that Contractors and subcontractors will use appropriate alternative dispute resolution mechanisms to resolve payment disputes.

The Contractor will not be reimbursed for work performed by subcontractors unless and until the Contractor ensures that the subcontractors are promptly paid for the work they have performed.

200-10 Special Provisions to Section 100. (Section Not Used)

200-11 Special Provisions to Section 105. No supplemental information for this section

200-12 Special Provisions to Section 110. (Section Not Used)

END OF SECTION 200

CA Specifications for Various Items

DESCRIPTION

Caltrans Section 26 Aggregate Base, Class 2

Contractor shall use Class 2 Aggregate Base per section 26 and payment will be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing of all materials and for all preparation, excavation and installation of these materials and for all labor, equipment, tools and incidentals necessary to complete this item.

Caltrans Section 19 Earthwork

Contractor shall use Section 19-6.03C for placing and compacting embankments. This price shall be incidental to the project for all preparation, excavation and placement of these materials and for all labor, equipment, tools and incidentals necessary to complete this item.

Caltrans Section 90 Concrete

Contractor shall abide by Section 90 of the Caltrans Specifications as indicated on these contract documents and on the contract plans. This price shall be incidental to various items in the contract plans and no additional payment shall be made thereof.

Item F-162 Chain-Link Fence

DESCRIPTION

162-1.1 This item shall consist of furnishing and erecting a chain-link fence in accordance with these specifications, the details shown on the plans, and in conformity with the lines and grades shown on the plans or established by the Engineer.

MATERIALS

162-2.1 Fabric The fabric shall be woven with a 9-gauge polyvinyl chloride (PVC)-coated steel wire in a 2-inch (50 mm) mesh and shall meet the requirements of ASTM F668, Class 2b. The color of the PVC coating shall be black. Top and bottom selvages shall be twisted and barbed. Metallic coated fabric shall have a clear acrylic coating applied to the selvage area after weaving.

162-2.2 Barbed wire. Barbed wire shall be 2-strand 12-1/2 gauge aluminum-coated wire with 4-point barbs and shall conform to the requirements of ASTM A121, Class II.

162-2.3 Posts, rails, and braces. Line posts, rails, and braces shall conform to the requirements of ASTM F1043 or ASTM F1083 as follows:

Galvanized tubular steel pipe shall conform to the requirements of ASTM F1043, Group IA, (Schedule 40), with the exception of wall thickness. Pipe coatings shall conform to Type A external and Type A internal.

The posts, rails and braces shall be PVC coated steel conforming to the requirements of ASTM F1043, Paragraph 7.3, Optional Supplemental Color Coating. The color of the PVC coating shall be as specified above in paragraph 162-2.1.

The dimensions of the posts, rails, and braces shall be in accordance with Tables I through VI of Federal Specification RR-F-191/3, as shown below.

PVC COATED GALVANIZED STEEL PIPE

Fabric Height	Up to 6'	Over 6' up to 8'	Over 8'
Terminal Post	2.375 x 0.130	2.875 x 0.160	2.875 x 0.160
Line Post	1.900 x 0.120	2.375 x 0.130	2.875 x 0.160
Top Rails & Braces	1.660 x 0.111	1.660 x 0.111	1.660 x 0.111

Gate Leaf Widths	Up to 6'	Over 6' up to 13'	Over 13' up to 18'	Over 18' up to 23'
Gate Post	2.875 x 0.160	4.00 x 0.226	6.625 x 0.280	8.625 x 0.322

Post dimensions are expressed in inches OD and multiplied by minimum wall thickness in inches.

162-2.4 Gates.

a. Swing gates and pedestrian gates. Gate frames shall consist of PVC coated galvanized steel pipe and shall conform to the specifications for the same material under paragraph 162-2.3. The fabric shall be of the same type material as used in the fence. The color of the PVC coating for the pipe and the fabric shall be as specified above in paragraph 162-2.1.

b. Cantilever gates. Cantilever gates shall be aluminum. Gate frames shall be made of 2-inch square aluminum tubing, alloy 6063-T6, weighing .94 pounds per lineal foot and shall be welded at all corners so as to form a rigid one-piece unit. Fabric shall be stretched and securely held on all four sides to the 2-inch square tubing by use of hook bolts and tension rods. Gate fabric shall match fence fabric.

The enclosed track shall be a combined track and rail aluminum extrusion having a total weight of 3.72 pounds per foot and designed to withstand a reaction load of 1,200 pounds.

Two swivel type zinc die cast trucks having four stainless steel sealed lubricant ball bearing wheels, 2 inches in diameter by 9/16 inch in width, with two side rolling wheels to insure alignment of truck in track shall be provided for each gate leaf. Trucks shall be held to post brackets by 7/8 inch diameter ball bolts with 1/2 inch shank. Truck assembly shall be designed to take the same reaction load as the track.

Guide wheel assemblies shall be provided for each supporting post. Each assembly shall consist of two rubber wheels 4 inches in diameter with oil impregnated bearings and shall be attached to the post so that the bottom horizontal member will roll between the wheels which can be adjusted to maintain the gate frames plumb and in proper alignment.

c. Card readers, key pads and push buttons. Refer to specification L-128, L-100 and L-110 for card reader, key pads and push buttons information and electrical work.

162-2.5 Wire ties and tension wires. Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-gauge marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A824.

All material shall conform to Federal Specification RR-F-191/4.

162-2.6 Miscellaneous fittings and hardware. Miscellaneous steel fittings and hardware for use with zinc-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. All steel fittings and hardware shall be protected with a zinc coating applied in conformance with ASTM A153. Barbed wire support arms shall withstand a load of 250 pounds (113 kg) applied vertically to the outermost end of the arm.

162-2.7 Concrete. Concrete shall be of a commercial grade with a minimum 28-day compressive strength of 3,000 psi per Caltrans Standard Specifications, Section 90.

162-2.8 Marking. Each roll of fabric shall carry a tag showing the kind of base metal (steel,

aluminum, or aluminum alloy number), kind of coating, the gauge of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal (steel, aluminum, or aluminum alloy number), and kind of coating.

162-2.9 NOT USED.

162-2.10 Cipher locks. The Contractor shall furnish and install one corrosion resistant Cipher lock on each pedestrian gate as shown in the plans. Cipher lock details and specifications shall be submitted to the engineer for approval prior to ordering.

162-2.11 NOT USED.

162-2.12 NOT USED.

162-2.13 Signs. Signs shall be provided in accordance with the details shown on the Contract Drawings.

CONSTRUCTION METHODS

162-3.1 Clearing fence line. All trees, brush, stumps, logs, and other debris within the width shown in the contract plans of the fence centerline shall be removed in accordance with Item P-151, Clearing and Grubbing before starting fencing operations.

162-3.2 Installing posts. Terminal posts shall be installed at fence ends, corners, angle points, and at intervals not exceeding 500 feet along straight sections of fence. Gate posts shall be installed on each side of each gate and at other locations recommended by the gate manufacturer. All other posts shall be line posts.

All posts shall be set in concrete at the required dimension and depth and at the spacing shown on the plans, unless otherwise specified.

Where shown on the plans, posts which are to be installed within wetland areas, or other soft, yielding soils as determined by the Engineer during construction, shall be installed by driving the post in the ground and securing them with drive anchors.

The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within seven (7) days after the individual post footing is completed.

Should rock be encountered at a depth less than the planned footing depth, a hole 2 inches (50 mm) larger than the greatest dimension of the posts shall be drilled to a depth of 12 inches (300 mm). After the posts are set, the remainder of the drilled hole shall be filled with grout, composed of one part Portland cement and two parts mortar sand. Any remaining space above the rock shall be filled with concrete in the manner described above.

In lieu of drilling, the rock may be excavated to the required footing depth. No extra compensation shall be made for rock excavation.

162-3.3 Installing top rails. The top rail shall be continuous and shall pass through the post tops. The coupling used to join the top rail lengths shall allow for expansion.

162-3.4 Installing braces. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall also be installed at all gate posts (both sides of the gate post where possible).

162-3.5 Installing fabric. The wire fabric shall be firmly attached to the posts and braced as shown on the plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than one inch (25 mm) or more than 4 inches (100 mm) from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches (150 mm) or less.

162-3.6 Electrical grounds. Electrical grounds shall be constructed where a power line passes over the fence and at 500 feet (150 m) intervals along the fence line. The ground shall be installed directly below the point of power line crossing. The ground shall be accomplished with a copper clad rod 8 feet (2.4 m) long and a minimum of 5/8 inches (16 mm) in diameter driven vertically until the top is 6 inches (150 mm) below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction. The Contractor shall comply with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, Paragraph 4.2.3.8, Lightning Protection for Fences and Gates, when fencing is adjacent to FAA facilities.

162-3.7 Installing tension wires. The bottom tension wire shall be installed within 6 inches of the bottom of the fabric and shall be at a consistent height throughout the length of fence.

162-3.8 Installing signs. Signs shall be installed on the fence and on gates at the locations shown and in accordance with the details shown on the Contract Drawings. The final location of signs on the gates shall be determined by the Owner during construction. The mounting system for signs on gates shall be such that signs do not interfere with operation of the gate.

No separate measurement for payment shall be made for providing and installing signs. Providing and installing signs shall be considered incidental to the work involved and the costs shall be included in the various pay items involved.

162-3.9 Removal of existing fence. Existing fence locations and quantities shall be field verified by the Contractor and approved by the Engineer prior to removal. Fence removal shall include removal of the entire fence regardless of its size, including fabric, posts, foundations, gates and all

appurtenances. Disposal of removed fence shall be off airport property. Holes left after fence removal shall be restored to a condition equal to or better that the surrounding area. No separate measurement for payment shall be made for restoration after fence removal. Restoration after fence removal shall be considered incidental to the work involved and the costs shall be included in the various pay items involved.

162-3.10 Cleaning up. After installation of fence is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. Suitable material may be deposited in embankment or shoulders areas. Unsuitable material shall be disposed off airport property.

Areas disturbed by the Contractor's operation shall be restored to their original condition. Restoration of surfaces shall be performed in accordance with the details of the Contract Drawings.

Where fence is installed or removed outside of the general grading limits, or in areas that would not otherwise be disturbed, restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items for fence installation or fence removal.

Where fence is installed or removed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved.

The Contractor shall be responsible for maintaining all disturbed surfaces and restorations until final acceptance.

The Contractor shall remove from the vicinity of the completed work all tools, buildings, equipment, etc., used during construction.

METHOD OF MEASUREMENT

162-4.1 Chain-link fence will be measured for payment by the linear foot for each type and size of fence installed. Measurement will be along the top of the fence from center to center of end posts, excluding the length occupied by gate openings.

162-4.2 The quantity of gates to be paid for under this item shall be the number of each type and size installed as completed units in place, ready for operation and accepted by the Engineer.

162-4.3 Removal of chain link fence will be measured for payment by the linear foot. Measurement will be along the top of existing fence from center to center of end posts prior to removal. Measurement will include gate openings if gates are present.

BASIS OF PAYMENT

162-5.1 Payment for chain-link fence will be made at the contract unit price per linear foot . This price shall be full compensation for furnishing all materials, including signs, and for all preparation, erection, and installation of these materials, and for all labor equipment, tools, and incidentals necessary to complete these items.

162-5.2 Payment will be made at the contract unit price for each complete gate installed in place by the contractor and accepted by the Engineer. These prices shall be full compensation for furnishing all materials, including mechanical gate operators and controls, card readers, keypads, motor-rated toggle switches, push buttons, wires, cipher locks and for all preparation, assembly and installation of these materials and for all labor, equipment, tools and incidentals necessary to complete these items.

162-5.3 Payment will be made at the contract unit price per linear foot for removal of existing chain link fence. This price shall be full compensation for all removal, handling and disposal of the existing fence and appurtenances and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item F-162-5.1-	8 Foot PVC Coated Chain Link Fence - per linear foot
Item F-162-5.2-	4 Foot Pre-Hung Pedestrian Gate with Cipher Lock- per each
Item F-162-5.2-	12 Foot Manual Double Swing Vehicle Gates - per each
Item F-162-5.2-	16 Foot Manual Double Swing Vehicle Gates - per each
Item F-162-5.2-	20 Foot Manual Double Swing Vehicle Gates - per each
Item F-162-5.2-	16 Foot Automatic Cantilever Vehicle Gate with Card Reader - per each
Item F-162-5.2-	16 Foot Automatic Cantilever Vehicle Gate with Card Reader/Key Pad/Push Button - per each
Item F-162-5.3-	Removal of Existing Fence and Gates - per linear foot

SUBMITTALS AND CERTIFICATIONS

162-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Catalogue data and certification that fence fabric meets the requirements specified.
- Certification that barbed wire meets the requirements specified.
- Catalogue data and certification showing that posts, rails and braces meet the requirements specified.
- Catalogue data and certification showing that gates meet the requirements specified.
- Concrete Mix Design.

MATERIAL REQUIREMENTS

ASTM A121	Standard Specification for Metallic-Coated Carbon Steel Barbed Wire
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric

ASTM A491	Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A572	Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
ASTM A653	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A824	Standard Specification for Metallic-Coated Steel Marcelled Tension Wire for Use With Chain Link Fence
ASTM A1011	Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High Strength Low Alloy with Improved Formability, and Ultra High Strength
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM B221	Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes
ASTM B429	Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube
ASTM F668	Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and other Organic Polymer Coated Steel Chain-Link Fence Fabric
ASTM F1043	Standard Specification for Strength and Protective Coatings on Steel Industrial Fence Framework
ASTM F1083	Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F1183	Standard Specification for Aluminum Alloy Chain Link Fence Fabric
ASTM F1345	Standard Specification for Zinc 5% Aluminum-Mischmetal Alloy Coated Steel Chain-Link Fence Fabric
ASTM G152	Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G153	Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
ASTM G155	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure

of Nonmetallic Materials

FED SPEC RR-F-191/3 Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)

FED SPEC RR-F-191/4 Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)

FAA-STD-019 Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment

END OF ITEM F-162

Item P-151 Clearing and Grubbing

DESCRIPTION

151-1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Engineer.

A. Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the Engineer is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.

B. Tree Removal shall consist of the cutting and removal of isolated single trees or isolated groups of trees, and the grubbing of stumps and roots. The removal of all the trees of this classification shall be in accordance with the requirements for the particular area being cleared.

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared or cleared and grubbed, and trees to be removed shall be staked on the ground by a licensed land surveyor hired by the Contractor. Each stake shall be located at an interval that allows for visual inspection from one stake to the next without the use of any special equipment. A survey map shall be provided by the Contractor's Surveyor showing the metes and bounds and all boundary stakes for the area to be cleared and grubbed. Points on the map shall be referenced to the project horizontal control. The survey map shall be approved by the Engineer prior to the Contractor commencing work on this item. Contractor's Surveyor shall also provide a point data file in ASCII format, and a digital file of the map in DXF compatible format on a CD-ROM, flash drive or disk with loading and unloading instructions.

Identification of Airport property lines for the purpose of identifying work limits shall be the responsibility of the Contractor. Where trees are to be removed off airport property, the Contractor shall provide a schedule indicating removal dates so the work can be coordinated with the property owner. The clearing and grubbing shall be done at a satisfactory distance in advance of the grading operations.

151-2.2 NOT USED.

151-2.3 Clearing and Grubbing. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials shall be removed. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and

like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with suitable on-site material from grading operations and properly compacted.

All holes under embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

When no other soil disturbance will occur as a result of this project, the ground shall be leveled in accordance with the requirements specified below.

151-2.4 Tree Removal on Airport Property. All trees designated to be removed shall be field flagged or painted by the Contractor and field verified and approved by the Engineer prior to the Contractor commencing with any work of this item.

All stumps shall be removed or reduced to chips by the use of an approved chipping machine or stump grinder. Stump grinding shall be at a minimum depth of one foot below existing grade. Chips shall be one-half inch maximum thickness. Chips resulting there from shall be disposed of in a satisfactory manner by the Contractor as specified herein.

When no other soil disturbance will occur as a result of this project, the ground shall be leveled in accordance with the requirements specified below.

151-2.5 Tree Removal and/or Trimming on Private Property. All trees designated to be removed from private property shall be field flagged by the Contractor and field verified and approved by the Engineer prior to the Contractor commencing with any work of this item. The Contractor shall provide a schedule indicating removal dates so the work can be coordinated with the property owner.

The Contractor shall take all precautions necessary to protect all homes, structures, fences, plants, utilities and appurtenances from damage. In addition, the Contractor shall protect from injury all trees which are to remain. The Contractor is responsible for locating and verifying the existence of all utilities. In the event of damage to any homes, structures, fences, plants, utilities and appurtenances, the Contractor shall immediately notify the Engineer. All damage caused to homes, structures, fences, plants, utilities and appurtenances as a result of the Contractor's operations shall be repaired immediately in a manner acceptable to the property owner and the Engineer, and at the Contractor's expense.

Stumps resulting from tree removal shall be removed to below ground level. The stump, base swell and root system shall be removed to 12 inches below the ground surface for a distance of 3 feet from the base of the tree. Stumps and roots may be removed by excavating equipment or grinding.

151-2.6 Disposal. All land cleared material shall be disposed of immediately after wetland clearing, clearing and grubbing, and tree removal operations. No blasting or burning of land cleared materials shall be permitted. As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such

material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry that cannot be used in construction and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case shall any materials be left in windrows or piles adjacent to or within the airport limits. No separate payment will be made for disposal. Contractor shall consider the costs of disposal in the various pay items involved. The Contractor shall dispose of all land cleared materials as follows:

A. In the interest of conservation, the Contractor shall make every possible effort to salvage marketable timber logs and fire wood, produced as a result of clearing operations. Logs and firewood produced from clearing and grubbing shall become the property of the Contractor, and shall be disposed of off-site at a location and in the manner selected by the Contractor.

B. All other woody material shall be reduced to chips by the use of an approved chipping machine or stump grinder. Chips shall be one-half inch maximum thickness and one and one-half inch maximum length. Chips resulting therefrom shall become the property of the Contractor, and shall be disposed of off-site at a location and in the manner selected by the Contractor.

C. Excavated stumps and all remaining materials resulting from land clearing operations shall be disposed of off-site at an area designated by the Contractor.

Disposal shall not be made in a swamp or wetlands and shall be in accordance with all Federal, State and Local regulations. The Contractor shall submit the "Spoils Deposition Release Form" for any spoils which are transported from the project site. A copy of this form can be found in Section 80 of the General Provisions.

151-2.7 Leveling of Ground Surface. All areas that have been cleared and grubbed and which are outside of proposed grading limits shall be graded adequately to accommodate Sponsor owned mowing equipment. Areas of abrupt transition in grade which would not allow the passage of mowing equipment will not be allowed. Rocks and boulders which protrude above the ground surface by more than 2 inches shall be buried on site or excavated and removed from the site. All rocks or boulders that are essentially flush with the surrounding ground surface and will allow the safe passage of mowing equipment may remain.

151-2.8 Restoration. After clearing and grubbing operations are completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site.

All areas disturbed by the Contractor's operation shall be restored to its original condition at no cost to the Owner. Restoration of surfaces shall be performed in accordance with the details shown on the plans.

Where clearing and grubbing operations are performed outside of the general grading limits, or in areas that would not otherwise be disturbed, the Contractor shall restore all disturbed areas in accordance with the topsoil, seeding and mulching specifications of this Contract. Restoration of these areas shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items of work involved.

Where clearing and grubbing operations are performed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved.

The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance.

151-2.9 Restoration of Private Property. After clearing and grubbing operations are completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site.

All surfaces, including lawns, landscaped areas, sidewalks, curbs, driveways and pavements damaged by the Contractor's operations shall be restored to their original condition. The Contractor shall restore all disturbed areas to a condition equal to or better than the surrounding area.

Restoration of turf areas on private property is intended to establish a lawn which is level and evenly graded with no sharp breaks in grade, and that is able to be maintained by the property owner with their mowing equipment. All stump holes ruts and depressions shall be backfilled with topsoil compacted to the satisfaction of the Engineer.

The Contractor shall clean the area of all litter and debris resulting from the tree removal operation.

No separate measurement for payment shall be made for restoration on private property. Restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the various pay items involved.

METHOD OF MEASUREMENT

151-3.1 Measurement for payment of wetland clearing, clearing and grubbing, and tree removal shall be made on a square yard basis and shall include all necessary wetland clearing, clearing and grubbing, and tree removal shown on the plans.

BASIS OF PAYMENT

151-4.1 Payment shall be made at the contract price per square yard for clearing and grubbing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item. Partial payment may be made as the work progresses at the discretion of the Engineer.

Item P-151-4.1 Clearing and grubbing - per square yard

SUBMITTALS AND CERTIFICATIONS

151-5.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Survey map of the areas to be cleared and grubbed
- A point data file in ASCII format and a digital file in DXF compatible format.

END OF ITEM P-151

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature.

MATERIALS

152-2.1 Unsuitable excavation. Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material, suitable for topsoil may be used for embankment construction outside of runway and taxiway safety areas, and outside of other paved areas when approved by the Engineer.

152-2.2 Suitable material. A material whose composition is satisfactory for use in embankment construction is designated as a suitable material. The moisture content has no bearing upon such designation, however, the moisture content of a material may be such that its use will require extensive manipulation. It is the Contractor's responsibility to determine the economics of using, or disposing and replacing, such materials. Materials which are defined to be suitable by this specification but determined by the Contractor to be un-economical for use shall be disposed of and replaced with other material at no additional cost to the Owner. In general, any mineral (inorganic) soil, blasted or broken rock and similar materials of natural or manmade origin, including mixtures thereof, are considered as suitable materials. Presence of oversize particles in the otherwise suitable material will not render the material unsuitable. In the event the Contractor determines that removal of the oversize material is uneconomical, he will be allowed to dispose of and replace with suitable material meeting the specification requirements at no additional cost to the Owner.

CONSTRUCTION METHODS

152-3.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the Engineer. All unsuitable material shall be disposed of in accordance with the Spoil section of this specification, unless otherwise noted. All waste areas shall be graded to allow positive drainage of the area and of adjacent areas. The surface elevation of waste areas shall not extend above the surface elevation of adjacent usable areas of the airport, unless specified on the plans or approved by the Engineer.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the Engineer notified per subsection 70-20. At the direction of the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

This project includes the construction of airport pavements. Airport pavements differ significantly from the construction of highway pavements and other traffic pavement applications. In some cases, the aircraft for which the pavement is being built may be lighter than many commonly available pieces of construction and hauling equipment. Construction equipment, methods and means for construction of pavements on this project are the responsibility of the Contractor. However the Contractor should be aware that common methods, means and equipment selections that may be appropriate for other pavements in the same local area as this project may not be appropriate for the construction of pavements under this Contract. The Contractor's special attention is called to the fact that it is his responsibility to select proper equipment, means and methods to meet the requirements of the specifications.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the Engineer, who shall arrange for their removal if necessary. The Contractor, at his or her expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

152-3.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the Engineer has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface, and the Contractor has agreed that the original ground lines shown on the original topographic mapping are accurate. All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer. Suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes shown on the plans. All unsuitable material shall be disposed of as specified or as shown on the plans.

When the volume of the excavation exceeds that required to construct the embankments to the grades indicated, the excess shall be used to grade the areas of ultimate development or disposed as directed by the Engineer. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

The grade shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work. The work shall be performed in the proper sequence with the other construction. Intercepting ditches shall be constructed prior to starting adjacent excavation operations. Excavated material shall be used to restore the area to original condition, unless otherwise directed by the Engineer. The Contractor shall use pumps and/or otherwise dewater as necessary to maintain the work area. No separate measurement or payment will be made for this work as it is considered necessary and incidental to the work items involved.

a. Compaction requirements for excavations. It shall be the Contractor's responsibility to properly compact all material in accordance with these Specifications and as shown on the Contract Drawings, and to correct any deficiencies resulting from insufficient or improper compaction of such materials. Compaction operations shall continue until the area is compacted to the depths and percent of maximum density stated below in accordance with ASTM D 698 If natural densities are not as required, Contractor shall compact subgrade from the surface to the densities required. If compaction from the surface is not possible, Contractor shall remove and replace subgrade to the required densities. The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3.

Subgrades Under Flexible Pavements

% Compaction for Non-Cohesive Soils				% Compaction for Cohesive Soils			
100%	95%	90%	85%	95%	90%	85%	80%

Subgrades Under Rigid Pavements

	% Compaction for Non-Cohesive Soils		% Compaction for Cohesive Soils
	100%	95%	90%
Depth	Top 6"	6-24"	Top 6"

When removal, manipulation and replacement of suitable materials in order to obtain the required depth of density is ordered by the Engineer, payment for such will be paid for as unclassified excavation.

When density tests are ordered more than twelve inches below subgrade, Contractor shall dig pits in the subgrade at the locations and to the depths requested. After completion of testing, Contractor shall

The in-place field density shall be determined in accordance with ASTM D 1556 (Sand Cone Method), D 2167 (Rubber Balloon Method), or D 6938 (Nuclear Method). If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

If a nuclear gage is used, it shall have been calibrated in accordance with ASTM D 6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily prior to its use on this contract.

All loose or protruding rocks on the back slopes of cuts shall be pried loose or otherwise removed to the slope finished grade line. All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the Engineer.

Blasting shall not be allowed

152-3.3 Borrow excavation. Borrow areas within the airport property, if any, are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the Engineer.

When borrow sources are outside the boundaries of the airport property, it shall be the Contractor's responsibility to locate and obtain the borrow sources, subject to the approval of the Engineer. The borrow source shall be dedicated to this project. The Contractor shall submit a plan showing dimensions and grades of borrow source, both existing and proposed. The Contractor shall notify the Engineer at least 15 days prior to beginning the excavation so necessary measurements and tests can be made. All topsoil shall be stripped from the borrow site by the Contractor and stockpiled prior to excavation. Stockpiled topsoil shall be used in restoration of the borrow site. All borrow pits shall be opened up to expose the various strata of acceptable material to allow obtaining a uniform product. All unsuitable material shall be removed and disposed of by the Contractor. Borrow pits shall be excavated to regular lines to permit accurate measurements, and they shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. No payment will be made for stripping topsoil or excavating and disposing of unsuitable material from the borrow site.

152-3.4 Preparation of embankment area. All sod and vegetation shall be removed from the subgrade and from areas beneath future pavement, regardless of the height of embankment. Where an embankment is to be constructed to a height of 4 feet (1.2 m) or less, all sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted as indicated in paragraph 152-2.6. When the height of fill is greater than 4 feet (1.2 m), sod not required to be removed shall be thoroughly disked and recompacted to the density of the surrounding ground before construction of embankment.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for preparation of embankment areas. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-3.5 NOT USED.

152-3.6 NOT USED.

152-3.7 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be fully repaired at the Contractor's expense.

Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-3.8 NOT USED.

152-3.9 NOT USED.

152-3.10 Spoil. Excess topsoil stripped from the site which is not utilized in the finished work shall be spoiled at locations shown on the Contract Drawings, unless otherwise directed.

All other material which is not suitable for embankment shall be spoiled off-site at a location selected by the Contractor.

For any material spoiled on airport property, Contractor shall submit a plan of the spoil area to the Engineer. No spoil shall be placed until the plan is acceptable to the Engineer. The plan shall include proposed dimensions and grades of the completed spoil areas. The plan shall provide for drainage of the spoil area which is consistent with existing drainage patterns of the surrounding areas. Prior to placing spoil in on-site locations, Contractor shall strip topsoil from limits of spoil area. Spoil shall be placed in accordance with the Formation of Embankments section of this specification. Upon completion of spoil operations, Contractor shall cover the spoil area with previously stripped topsoil. Contractor shall grade, seed and mulch the spoil area. Grading shall be such that the final turfed spoil area is smooth and with side slopes no greater than 25%. Spoil area shall be maintainable with Owner's mowing equipment. The surface elevation of spoil areas shall not extend above the surface elevation of adjacent usable areas of the Airport, unless approved by the Engineer.

For any material spoiled off airport property, the Contractor shall submit a "Spoil Deposition and Release" to the Engineer. A sample form is contained in Specific Airport Operating Requirements of these Specifications and shall be acceptable to the Engineer prior to removing material from the project.

No direct payment will be made for spoiling operations. The cost of spoiling material on site including stripping, grading, topsoiling, seeding & mulching the spoil area, or of hauling excess material off-site, shall be considered incidental to this Contract and the costs shall be included in the various pay items involved.

152-3.11 Removal of water. The Contractor is responsible for removal of water regardless of its source. Measures shall be taken to protect the excavation from surface water runoff as well as for dewatering the excavation from any water which has entered the excavation. The cost for removal of water shall be considered a subsidiary obligation of the Contractor and included in the contract price for the pay items of work involved.

METHOD OF MEASUREMENT

152-4.1 No measurement for direct payment will be made for unclassified excavation on any portion of the work of this Contract. Unclassified excavation is considered a necessary and incidental obligation for the completion of the work and any costs for unclassified excavation shall be included in the various items of work involved.

BASIS OF PAYMENT

152-5.1 No payment will be made separately or directly for unclassified excavation. All unclassified excavation will be considered a necessary and incidental part of the work and its cost will be considered by the Contractor and included in the Contract price for the pay items of work involved.

SUBMITTALS AND CERTIFICATIONS

152-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- None required.

TESTING REQUIREMENTS

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D 1883	Test Method for Bearing Ratio of Laboratory Compacted Soils (CBR)
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

MATERIAL REQUIREMENTS

ASTM D 2487	Test Method for Classification of Soils for Engineering Purposes

END OF ITEM P-152

Item P-153 Controlled Low-Strength Material (CLSM)

DESCRIPTION

153-1.1 This item shall consist of furnishing, transporting, and placing a controlled low-strength material (CLSM) as flowable backfill in trenches or at other locations shown on the plans or as directed by the Engineer.

MATERIALS

153-2.1 Materials.

a. Portland cement. Portland cement shall conform to the requirements of ASTM C 150 Type I or II. If for any reason, cement becomes partially set or contains lumps of caked cement, it shall be rejected. Cement salvaged from discarded or used bags shall not be used.

b. Fly ash. Fly ash shall conform to ASTM C618, Class C or F.

c. Fine aggregate (sand). Fine aggregate shall conform to the requirements of ASTM C33 except for aggregate gradation. Any aggregate gradation which produces performance characteristics of the CLSM specified here will be accepted, except as follows.

Sieve Size	Percent Passing by weight
3/4 inch (19 mm)	100
No. 200 (0.075 mm)	0 - 12

d. Water. Water used in mixing shall be potable and free of oil, salt, acid, alkali, sugar, vegetable matter, or other substances injurious to the finished product. Dyes and other methods of coloring the backfill material may be incorporated if desired.

MIX DESIGN

153-3.1 Proportions. The Contractor shall submit, to the Engineer, a mix design including the proportions and source of aggregate, fly ash, cement, water, and approved admixtures. No CLSM mixture shall be produced for payment until the Engineer has given written approval of the proportions. The proportions shall be prepared by a laboratory and shall remain in effect for the duration of the project. Laboratory costs are incidental to this item. The proportions shall establish a single percentage or weight for aggregate, fly ash, cement, water, and any admixtures proposed.

a. Compressive strength. CLSM shall be designed to achieve a 28-day compressive strength of 100 to 200 psi (690 to 1379 kPa) when tested in accordance with ASTM D4832. There should be no significant strength gain after 28 days.

b. Consistency. CLSM should be designed to achieve a consistency that will produce an approximate 8-inch (200 mm) diameter circular-type spread without segregation when tested by: (1) filling a 3-inch inside diameter by 6-inch length flow cylinder (non-absorbent pipe) (2) strike off of the flow cylinder and start of lift within five seconds of filling and (3) by steady upward

pull, lift the cylinder in a time period of between two and four seconds. Adjustments of the material proportions should be made to achieve proper solid suspension and flowable characteristics, however the theoretical yield shall be maintained at one cubic yard (cubic meter) for the given batch weights.

CONSTRUCTION METHODS

153-4.1 Placement.

a. Placement. CLSM may be placed by any reasonable means from a mixing unit into the space to be filled. Agitation is required during transportation and waiting time. Placement shall be performed so structures or pipes are not displaced from their final position and intrusion of CLSM into unwanted areas is avoided. The material shall be brought up uniformly to the fill line shown on the plans or as directed by the Engineer. Each placement of CLSM shall be as continuous an operation as possible. If CLSM is placed in more than one layer, the base layer shall be free of surface water and loose foreign material prior to placement of the next layer.

b. Limitations of placement. CLSM shall not be placed on frozen ground. Mixing and placing may begin when the air or ground temperature is at least 35°F (2°C) and rising. At the time of placement, CLSM shall have a temperature of at least 40°F (4°C). Mixing and placement shall stop when the air temperature is 40°F (4°C) and falling or when the anticipated air or ground temperature will be 35°F (2°C) or less in the 24 hour period following proposed placement.

153-4.2 Curing and protection

a. Curing. The air in contact with the CLSM shall be maintained at temperatures above freezing for a minimum of 72 hours. If the CLSM is subjected to temperatures below 32°F (0°C), the material may be rejected by the Engineer if damage to the material is observed.

b. Protection. The CLSM shall not be subject to loads and shall remain undisturbed by construction activities for a period of 48 hours or until a compressive strength of 15 psi (105 kPa) is obtained. The Contractor shall be responsible for providing evidence to the Engineer that the material has reached the desired strength. Acceptable evidence shall be based upon compressive tests made in accordance with paragraph 153-3.1a.

153-4.3 Acceptance. Acceptance of CLSM delivered and placed as shown on the plans or as directed by the Engineer shall be based upon mix design approval and batch tickets provided by the Contractor to confirm that the delivered material conforms to the mix design. The Contractor shall verify by additional testing, each 1,000 cubic yards (765 m^3) of material used. Verification shall include confirmation of material proportions and tests of compressive strength to confirm that the material meets the original mix design and the requirements of CLSM as defined in this specification. Adjustments shall be made as necessary to the proportions and materials prior to further production.

METHOD OF MEASUREMENT

153-6.1 No separate measurement shall be made for controlled low strength material. Controlled low strength material shall be considered necessary and incidental to the work of this Contract.

BASIS OF PAYMENT

153-7.1 No payment will be made separately or directly for controlled low strength material. Controlled low strength material shall be considered necessary and incidental to the work of this Contract and the costs shall be included in the various pay items involved.

SUBMITTALS AND CERTIFICATIONS

153-8.1 Submittals of "Shop and Setting Drawings", "Working Drawings", "Catalogue Data" and "Certifications" for review shall be submitted in accordance with the appropriate sections of the General Provisions. Submittals and Certifications required are as follows:

- Submittal for Portland cement
- Submittal for fly ash
- Certification and gradation for fine aggregate.
- CLSM Mix Design showing proportions of materials
- Compressive strength test results
- Consistency test results

TESTING REQUIREMENTS

ASTM D4832	Standard Test Method for Preparation and Testing of Controlled Low-Strength Material (CLSM) Test Cylinders

MATERIAL REQUIREMENTS

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C150	Standard Specification for Portland Cement
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C595	Standard Specification for Blended Hydraulic Cements

END OF ITEM P-153

Item L-128 Mechanical Gate Operators and Controls

DESCRIPTION

128-1.1 This item shall consist of furnishing all materials, equipment and labor necessary for the complete installation of the mechanical gate operators and electrical control devices, in accordance with this specification section and as shown on the plans.

The following items are specifically included without limiting the generality implied by these Specifications and the Plans.

- Excavation, trenching and backfilling
- Underground Electrical Duct, Conduit and Fittings
- Reinforced Concrete Pads and Bases
- Gate Operators
- Gate Control Panels
- Card Reader/Keypad devices
- Call Box Intercommunication and Operator Systems
- Electrical Disconnect Switches
- Removal of Existing Equipment, Bollards, etc.
- Circuit Breakers
- Protective Bollards
- Local 3 Button Stations
- Inner/Outer Safety Loops
- Exit Loop
- Cables and Connections
- Restoration of Surfaces
- Removal of Water
- Gate Operator Timer

MATERIAL REQUIREMENTS

128-2.1 DUCT BANKS, CONDUIT AND FITTINGS. All duct banks and conduit fittings shall conform to Item L-110, Installation of Airport Underground Electrical Duct.

128-2.2 CONCRETE. All concrete work shall conform to Caltrans Section 90, California Concrete.

128-2.3 MECHANICAL GATE OPERATORS. Mechanical gate operators shall be for single sliding (cantilever) type gates. Gates shall not be chain-driven. Standard equipment shall include reversible detachable AC electric drive motor, brakes, safety clutch, limit switches, switch box assembly, manual quick disconnect switch, all enclosed in a weather resistant factory finished enclosure, conforming to NEMA Standards. The unit, shall be HySecurity Model "Slidedriver 50VF2," or approved equal. Gate operators shall be a complete unit ready for mounting on a concrete base and shall have a full 2 year manufacturer's warranty. The warranty shall include all maintenance, equipment, materials and labor required to keep the operator and appurtenances in good working order.

a. Electrical Requirements: Mechanical gate operator drive motors shall be rated to operate the gate at 10 inches per second with a minimum HP rating of 1/2 and with the voltage rating shown on the plans.

A control panel mounted transformer shall provide secondary control voltage for mechanical card operators and radio control receivers.

b. The mechanical gate operator shall have the following safety features:

1. A quick disconnect switch for manual gate operation with rear panel access.

2. The safety clutch shall have an automatic reversing device upon accidental impact.

3. A reversing safety contact strip.

4. An electric solenoid brake and limit switches shall control the travel speed of the gate, not to exceed 15 inches per second. The solenoid brake and limit switches shall stop the gate at its proper position in each direction of travel.

5. A red strobe warning lamp in a NEMA 3R enclosure, by Federal Signal or approved equal. The warning lamp shall be illuminated during all gate operations.

6. The gate shall lock automatically when closed.

7. A thermal overload protection circuit shall cut power to the drive motor in case of overheating.

8. A grounding system for the operator shall be installed consisting of #10 bare copper wire, grounding clips and grounding rod (5/8" diameter and 8 feet long minimum).

c. Provide 3 spare solid state circuit boards, 1 spare timer to close, 1 spare radio controller, and 1 spare loop detector for each gate operator installed.

d. Provide 10 garage door style remote gate controllers per gate operator installed.

128-2.4 COMBINATION CARD READER/KEY PAD. Magnetic card readers which activate the gate operators shall be activated when a magnetic coded card-key is within a certain proximity. The card reader enclosure shall be weatherproof, tamperproof, rustproof, with a factory applied finish, and have a manual key lock access door in the front panel of the unit for access to the operating mechanism. The operating mechanism shall have an adjustment for field changing the unit from one set of coded cards to another, without the use of special tools. Each card reader shall operate on the same coded card key. Provide HID Global "ProxPro with Keypad" or approved equal.

The card readers shall be pedestal mounted as manufactured by Federal APD Corporation, Model KK IV, or approved equal, with adjustable mounting post and flange, ready for mounting on a concrete base.

One thousand card keys shall be provided to the Owner. The card keys shall be permanently stamped with sequential numbers.

128.2.5 CALL BOX INTERCOMMUNICATION AND OPERATOR SYSTEM. Communication shall be attainable between a base office location as designated by the Owner, the call box at the gate, and any number of portable two-way radios. Gate shall be operable by the call box at gate or remotely by controls at the base office or the portable radios. All system communication shall be wireless, except for any control wire connecting the call box at the gate to the gate operator. Pushbuttons at the call box shall be momentary contact-type, rated for outdoor use, operate on DC input power, and shall be compatible with gate operator motors. Provide Ritron system model "GateGuard" or approved equal. Coordinate exact sequence of operation with the Owner, including number of portable radios.

128-2.6 DISCONNECT SWITCH. A main power motor-rated disconnect or toggle switch shall be provided at each gate operator.

128-2.7 CIRCUIT BREAKERS. Circuit breakers shall be installed as shown on the plans, with AIC rating to match existing breakers. Breakers shall be UL-listed for use in their panels.

128-2.8 PROTECTIVE BOLLARDS. Protective bollards shall be extra strong galvanized steel pipe of the size shown on the plans.

128-2.9 DISTRIBUTION PANEL. Distribution panel shall be as shown on the plans.

128-2.10 LOOP DETECTORS. Loop detectors for inner/outer safety loops and exit loops shall be digital self-tuning and shall be installed as shown on the plans and as recommended by the electrical control manufacturer.

128-2.11 GATE OPERATOR TIMER. Timer shall be on delay adjustable and capable of closing the gate from its full open position. Timer shall be used with card readers and/or key pads to cause complete gate closure. Timer shall be installed per the manufacturer's recommendation and located in the gate operator housing.

128-2.12 REINFORCING STEEL. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A 615, Grade 60.

128-2.13 WIRE. Wire shall be in accordance with Item L-100, Automatic Gate Electrical Work.

CONSTRUCTION METHODS

128-3.1 EXCAVATION.

a. The Contractor shall do all excavation for structures and structure footings to the lines and grades or elevations shown on the plans, or as directed by the Engineer. The

excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximate only; and the Engineer may order, in writing, changes in dimensions or elevations of footings necessary to secure a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the Engineer. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation, and excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The bracing, sheeting or shoring shall not be removed in one operation, but shall be done in successive stages as determined by the Engineer to prevent overloading of the pipe during backfilling operations. The cost of bracing, sheathing, or shoring and the removal of same shall be included in the unit price bid for the structure.

d. Unless otherwise provided, bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After each excavation is completed, the Contractor shall notify the Engineer to that effect; and concrete or reinforcing steel shall be placed after the Engineer has approved the depth of the excavation and the character of the foundation material.

f. The Contractor is responsible for removal of water regardless of its source. Measures shall be taken to protect the excavation from surface water runoff as well as for dewatering the excavation from any water which has entered the excavation. The cost for removal of water shall be considered a subsidiary obligation of the Contractor and included in the contract price for the pay items of work involved.

128-3.2 BASES AND PADS. Bases and pads are to be formed using clean metal reusable forms or new oiled plywood to size and depth as shown on the plans. Anchor bolts, conduit, reinforcing wire mesh and grounding equipment installed therein as shown on the plans. Top of forms to be set level with form plumb.

128-3.3 INSTALLATION OF EQUIPMENT. The installation of the motor, gate operator, chain and sprocket assembly, gate bracket wiring, conduit, disconnect switches, grounding and all appurtenances shall comply with the manufacturer's recommended procedures. The safety switch shall not overload the drive motor, and the self-reversing safety device shall not be affected. The solenoid brake and gate travel limit switches shall be timed and set to proper sequence of operation. A manufacturer's representative shall be on-site to verify proper installation and operation of the gate operator system.

Installation of the card readers will be made to the manufacturer's recommended procedures.

128-3.4 WIRING. Furnish all necessary labor and materials and make complete above-ground electrical connections including power connections and bonding of the enclosure to ground system. Install all power feeders and branch circuits as shown on the plans.

128-3.5 TESTING. The installation of each operator and control device shall be tested in operation as a completed unit prior to acceptance. Tests shall prove input voltage, open circuit voltage and line voltage and shall be within the tolerance stated by the equipment manufacturers. Testing equipment shall be furnished by the Contractor. Tests shall be conducted in the presence of the Engineer and shall be to their satisfaction.

128-3.6 BACKFILLING.

a. After a structure has been completed, the area around it shall be filled with approved material, in horizontal layers not to exceed 8 inches loose in depth, and compacted to the density required. Each layer shall be deposited around the structure to approximately the same elevation. The top of the fill shall meet the existing elevation or as directed by the Engineer.

b. Backfilling shall not be placed against any structure until permission is given by the Engineer. In the case of concrete, such permission shall not be given until the concrete has been in place 7 days or until tests made by the laboratory, under the supervision of the Engineer, establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

c. Backfill shall not be measured for direct payment. Performance of this work shall be considered as a subsidiary obligation of the Contractor covered under the Contract unit price per unit.

128-3.7 CLEANING AND RESTORATION OF SITE. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankments, shoulders, or as ordered by the Engineer, provided it is suitable material. The Contractor shall restore all disturbed areas to their original condition. Where no other work or soil disturbance is required, restoration shall be considered incidental to the respective L-128 pay item.

Gate operators installed in areas of existing special surface treatment, such as aprons, taxiways, runways, shoulders, roads, sidewalks, or similar stabilized surfaces shall be restored using materials comparable to original materials, and at depths matching existing layers. Payment for restoration shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include all costs associated with restoration in the various pay items involved.

Gate operators installed in proposed turf areas shall be restored in accordance with the topsoil, seeding and mulching specifications of this contract. Topsoil, seeding and mulching will be paid

for at the contract unit price for the pay items involved. All other work associated with restoration shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include the costs associated with restoration in the various pay items involved.

Gate operators installed in areas of proposed pavement such as aprons, taxiways, runways, shoulders, roads, sidewalks, or other similar stabilized surfaces shall be restored using the materials specified or as shown on the plans. Payment for restoration up to the bottom of the proposed pavement section shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include all costs associated with restoration in the various pay items involved.

After all work is completed, the Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

METHOD OF MEASUREMENT

128-4.1 Electrical installations of automatic gate operators and card readers, including all electrical work necessary for proper connection and operation to the satisfaction of Owner and Engineer and all work are incidental to gates as specified in section F-162.

BASIS OF PAYMENT

128-5.1 Electrical installations of automatic gate operators, including all electrical work necessary for proper connection and operation to the satisfaction of Owner and Engineer and all work is incidental to gates as specified in section F-162. No separate payment will be made for gate operator or card reader electrical work.

SUBMITTALS AND CERTIFICATIONS

128-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Concrete mix design.
- Catalogue data and certification showing that the gate operator, 3-button station, remote control equipment, card readers, and loop detectors meet the requirements specified.
- Catalogue data and certification showing that the disconnect switch meets the requirements specified.
- Catalogue data and certification showing that the circuit breakers meet the requirements specified.
- Certification that the bollard meets the requirements specified.
- Catalogue data and certification showing that all components of the distribution panel meet the requirements specified.
- Catalogue data and certification showing that the gate timer meets the requirements specified.
- Catalogue data and certification showing that the reinforcing steel meets the requirements specified.

END OF ITEM L-128

Item M-150 Project Survey and Stakeout

DESCRIPTION

150-1.1 Project survey and stakeout shall be in accordance with this specification. The Contractor shall do all necessary surveying required to construct all elements of the Project. Project survey and stakeout shall be performed by competently qualified personnel acceptable to the Engineer. The survey and stakeout shall be progressed in advance of construction operations such that the layout does not impede the construction schedule. All survey work shall be provided under the direction of a Licensed Surveyor licensed in the State in which the project is located.

MATERIALS

150-2.1 All instruments, equipment, stakes and any other material necessary to perform the work satisfactorily shall be provided by the Contractor. It shall be the Contractor's responsibility to maintain these stakes in their proper position and location at all times.

Upon request, the Contractor shall make available to the Engineer, a rod, level, and tripod. The rod shall be 15 feet in length with hundredth of a foot graduation. The level shall be self-leveling and have documentation demonstrating it has been calibrated within twelve months of the project's commencement. All equipment provided shall be in good working order and maintained by the Contractor throughout the duration of the project.

CONSTRUCTION METHODS

150-3.1 GENERAL. Project survey and stakeout shall be in accordance with Section 50-06 "Construction Layout and Stakes" of the General Provisions and this specification.

Contractor's surveyor shall be onsite during installation of NAVAIDS to verify elevations, alignment and siting angles.

150-3.2 LAYOUT AND STAKEOUT. The Contractor shall be responsible for trimming trees, brush and other objects from survey lines in advance of all survey work to permit accurate and unimpeded work by his survey crews.

The exact position of all work shall be established from control points, baseline points or other points of similar nature which are shown on the Contract Drawings. Any error, apparent discrepancy or absence in or of data shown or required for accurately accomplishing the stakeout survey shall be referred to the Engineer for interpretation or furnishing when such is observed or required. Stakes shall be clearly and legibly marked based on computations and measurements made by the Contractor. Markings shall include centerline station, offset and cut or fill marks. If markings become faded or blurred, they shall be restored by the Contractor, if requested by the Engineer. Contractor shall locate and place all cut, fill, slope, fine grade or other stakes and points for the proper progress of the work. All control points shall be properly guarded and flagged for easy identification. Reference points, baselines, stakes and benchmarks for borrow pits shall be established by the Contractor. Permanent survey marker locations shall be established and referenced by the Contractor.

The Contractor shall be responsible for the accuracy of his work and shall maintain all reference points, stakes, etc., throughout the life of the Contract. Damaged or destroyed points, benchmarks or stakes, or any reference points made inaccessible by the progress of the construction, shall be replaced or transferred by the Contractor. Any of the above points which may be destroyed or damaged shall be transferred by the Contractor before they are damaged or destroyed. All control points shall be referenced by ties to acceptable objects and recorded. Any alterations or revisions in the ties shall be so noted and the information furnished to the Engineer immediately. All stakeout survey work shall be referenced to the centerlines shown on the Contract Drawings indicating station and offset. All computations necessary to establish the exact position of the work from control points shall be made by the Contractor. All computations, survey notes and other records necessary to accomplish the work shall be neatly made, and shall be made available to the Engineer upon request.

The Engineer may check all or any portion of the stakeout survey work or notes made by the Contractor. Any necessary correction to the work shall be made immediately by the Contractor. Such checking by the Engineer shall not relieve the Contractor of any responsibilities for the accuracy or completeness of his work.

Upon completion of all grading and paving work, the Contractor shall re-establish baseline points, control points, and centerline points at 100 foot stations. The baseline points, control points, and centerline points to be established shall be the same as those used to develop design quantities.

Prior to the final cross-section survey of any borrow pits by the Engineer, the Contractor shall re-establish baseline points and stationing, as well as any necessary benchmarks as required by the Engineer.

Existing property corners, markers, stakes, iron pins, and survey monuments defining property lines which have a high probability of being disturbed during construction shall be properly tied into fixed reference points before being disturbed and accurately reset in their proper position upon completion of the work.

METHOD OF MEASUREMENT

150-4.1 Measurement for payment of project survey and stakeout will be made on a lump sum basis. Measurement for partial payments, at the discretion of the Engineer, will be in proportion to the total amount of contract work completed.

BASIS OF PAYMENT

150-5.1 The lump sum price bid shall include the cost of furnishing all labor, equipment, instruments and all other material necessary to satisfactorily complete the project surveying and stakeout.

Partial payments of the lump sum price bid may be made for this item as the work progresses, at the discretion of the Engineer.

Payment will be made under:

Item M-150-5.1 Project Survey and Stakeout – per lump sum

SUBMITTALS AND CERTIFICATIONS

150-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Catalog data showing the make and model of all surveying instruments to be used on the project.
- Verification survey point data ASCII file.
- Surveying instrument calibration certification(s) within the previous 12 months of project startup

END OF ITEM M-150

Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

DESCRIPTION

156-1.1 This item shall consist of the installation and maintenance of temporary and permanent control measures, and the removal and restoration of temporary control measures as shown on the plans or as ordered by the Engineer during the life of a contract to control water pollution, soil erosion, and siltation. Control measures shall be maintained throughout the life of this contract or until final stabilization as determined by the Engineer.

The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be design, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

156-2.4 Silt fence. The silt fence fabric shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall consist of fabric, wood posts and wire support fence meeting the requirements of ASTM D6461.

Fabric shall be recommended by the manufacturer for use as a silt fence and shall have the following properties:

Physical Properties	Requirements	Test Method
Grab Strength for Supported Fence		
Machine Direction	90 lbs. (MARV) for supported fence	ASTM D 4632
X-Machine Direction	90 lbs. (MARV)) for supported fence	ASTM D 4632
Grab Strength for Unsupported Fence		
Machine Direction	125 lbs. (MARV)) for unsupported fence	ASTM D 4632
X-Machine Direction	100 lbs. (MARV)) for unsupported fence	ASTM D 4632
Permittivity	0.05 sec^{-1} (min.)	ASTM D 4491
Apparent Opening Size	#30 U.S. Std. Sieve (max.)	ASTM D 4751
Ultraviolet	70 % (min.) retained strength after 500h	ASTM D 4355

Wood posts shall be of sound quality hardwood with minimum dimensions of 1.2 inches by 1.2 inches by 36 inches long. Supported silt fence shall have a maximum post spacing of 4 feet. Unsupported silt fence with elongation $\geq$ 50% shall have a maximum post spacing of 4 feet. Unsupported silt fence with elongation < 50% shall have a maximum post spacing of 2 feet.

Wire fence shall be 14 gauge minimum with maximum 6 inch mesh opening.

CONSTRUCTION REQUIREMENTS

156-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The Engineer shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

156-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the Engineer.

Several methods of controlling dust and other air pollutants include:

Exposing the minimum area of erodible earth.
Applying temporary mulch with or without seeding.
Using water sprinkler trucks.
Using covered haul trucks.
Using dust palliatives or penetration asphalt on haul roads.
Using plastic sheet coverings.

156-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately if project conditions permit; otherwise, temporary erosion control measures may be required.

The Contractor shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the Engineer.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the Engineer. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the Engineer, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The Engineer may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The Contractor is responsible for preventing soil erosion and siltation, and for correcting the effects of soil erosion and siltation. The erosion control features installed by the Contractor shall be maintained by the Contractor in a manner acceptable to the Engineer until final stabilization of the disturbed areas. Final stabilization is generally defined as when all soil disturbing activities have been completed and a uniform perennial vegetative cover with a density of 80% for the area has been established. However, removal of soil erosion and siltation control features shall not relieve the Contractor from his obligation to prevent soil erosion and siltation, nor to correct the effects of soil erosion and siltation. Upon removal of temporary erosion and sediment control features, the Contractor shall restore all disturbed areas to a condition equal to or better than original. There will be no separate payment made for restoration of surfaces. The Contractor shall consider the cost of restoration as a subsidiary obligation of performing the work and shall include the costs of restoration in the various pay items involved.

Whenever construction equipment must cross watercourses at frequent intervals, temporary structures should be provided.

Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

Measures performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly. The costs of these items shall be included in the unit price bid for Compliance with Pollution, Erosion, and Siltation Control.

If the Contractor fails to implement and maintain erosion and sediment control practices as required by this Specification, the Owner shall correct the adverse conditions by any means deemed appropriate and shall deduct the cost of the corrective actions from any monies due the Contractor.

Where major nonconformance with the requirements of this specification is noted by the Engineer and compliance is not obtained by the Contractor, all contract work may be stopped by direct order of the Engineer.

METHOD OF MEASUREMENT

156-4.1 Measures and practices required for compliance with this specification for protection of construction areas shall be measured on a lump sum basis. Measures and practices shall include, but not be limited to, air pollution prevention, water pollution prevention, temporary seeding, temporary mulching, construction road stabilization, dust control, protecting vegetation, placing and installing silt fence and erosion and sediment control practices required due to the Contractor's means and methods of construction, and for borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites.

BASIS OF PAYMENT

156-5.1 Payment will be made at the lump sum bid price for compliance with pollution, erosion, and siltation control. The lump sum price bid shall include the cost of all labor, material, equipment and all incidentals necessary to complete this item. Partial payments may be made at the discretion of the Engineer as the work progresses, based on contract time or percent work complete.

Payment will be made under:

Item P-156-5.1 Compliance with Pollution, Erosion, and Siltation Control – per lump sum

Temporary control features not covered by contract items that are ordered by the Engineer will be paid for in accordance with Section 90-05 Payment for Extra work.

SUBMITTALS AND CERTIFICATIONS

156-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Catalog data and certification showing that materials to be supplied meet the requirements specified.

MATERIAL REQUIREMENTS

ASTM D6461 Standard Specification for Silt Fence Materials

AC 150/5200-33 Hazardous Wildlife Attractants

END OF ITEM P-156

Item T-901 Seeding

DESCRIPTION

901-1.1 This item shall consist of soil preparation, seeding and related operations on the areas shown on the plans or as directed by the Engineer in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the Engineer duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall be applied as follows:

Percent	**Percent**
By Weight	**Variety**
45%	Annual Rye
45%	California or Wild Oats
9%	Orchard Grass
1%	California Native Wildflowers

901-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified, and shall meet the requirements of applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;

b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or

c. A granular or pellet form suitable for application by blower equipment.

Fertilizers shall contain the following compounds by weight:

Nitrogen	10%
Phosphorous	0%[1]
Potash	4%

[1] Fertilizers which contain up to 0.67% phosphorous are allowed

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the Engineer before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 1 inch (25 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches (125 mm) as a result of grading operations and, if immediately prior to seeding, the top 3 inches (75 mm) of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate of 20 pounds per 1,000 square feet.

c. Seeding. Grass seed shall be sown at the rate of 3 pounds per 1,000 square feet immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated herein. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot (60 to 97 kg per meter) of width for clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot (223 to 298 kg per meter) of width for sandy or light soils.

901-3.3 Wet application method.

a. General. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application for seed and fertilizer shall be as specified in paragraph 901-3.2.

b. Spraying equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons (190 liters) over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons (380 liters) per minute at a pressure of 100 lb / sq inches (690 kPa). The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch (16 mm) solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet (6 to 30 m). One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet (15 m) in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime, if required, shall be applied separately prior to the fertilizing and seeding operations. The Contractor shall be responsible for determining if the addition of lime is required to produce a suitable seedbed. The cost of providing and placing lime shall be considered incidental and shall be included in the cost of seeding. Not more than 220 pounds (100 kg) of lime shall be added to and mixed with each 100 gallons (380 liters) of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds (100 kg) of these combined solids shall be added to and mixed with each 100 gallons (380 liters) of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. Brackish water shall not be used at any time. The Contractor shall identify to the Engineer all sources of water at least two (2) weeks prior to use. The Engineer may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the Engineer following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

d. Spraying.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the Engineer, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 No measurement will be made for direct payment of seeding as the cost of furnishing and sowing shall be considered a subsidiary obligation in completing the various items involved.

BASIS OF PAYMENT

901-5.1 No payment will be made separately or directly for this time on any part of the work unless otherwise listed in the various payment items. All seeding will be considered a necessary and incidental part of the work and its cost shall be considered by the Contractor and included in the contract price for the pay items of work involved.

SUBMITTALS AND CERTIFICATIONS

901-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Catalogue data and certification for the seed.
- Catalogue data and certification showing for the fertilizer.

MATERIAL REQUIREMENTS

ASTM C602	Standard Specification for Agricultural Liming Materials
ASTM D977	Standard Specification for Emulsified Asphalt
FED SPEC	JJJ-S-181, Federal Specification, Seeds, Agricultural

END OF ITEM T-901

Item L-110 Airport Underground Electrical Duct Banks and Conduits

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits. It shall also include all turfing, trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

This Specifications Section is provided for reference only. All airport underground electrical duct bank and conduit work in this project is incidental to gate installation. Refer to Specifications Section F-162 for fence requirements and Section L-128 for gate operator requirements.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the Engineer.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the Engineer and replaced with materials that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the Engineer for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Contractor's submittals shall be neatly bound in a properly sized 3-ring binder, tabbed by specification section. The Engineer reserves the right

to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10 mil thick coat of asphaltum sealer or shall have a factory bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mil of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions.

110-2.3 Plastic conduit. Plastic conduit and fittings-shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

a. Type I–Schedule 40 PVC suitable for underground use either direct-buried or encased in concrete.

b. Type II–Schedule 40 PVC suitable for either above ground or underground use.

c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.

d. Type IV –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 Split conduit (not used). Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high

density polyethylene complete with interlocking cap and base pads, They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall conform to specification Caltrans 90, using **1** inch maximum size coarse aggregate with a minimum 28-day compressive strength of **3,600** psi. Where reinforced duct banks are specified, reinforcing steel shall conform to ASTM A615 Grade 60. Concrete and reinforcing steel are incidental to the respective pay item of which they are a component part.

110-2.7 Flowable backfill. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material. Fill shall be designed to achieve a 28-day compressive strength of 200 psi (1.4 MPa) under pavement.

110-2.8 Detectable warning tape. Plastic, detectable, American Wood Preservers Association (AWPA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item.

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The Engineer shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches (50 mm) inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches (75 mm) per 100 feet (30 m). On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. No duct bank or underground conduit shall be less than 18 inches (0.5 m) below finished grade. Where under pavement, the top of the duct bank shall not be less than 18 inches (0.5 m) below the subgrade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch (6 mm) smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor's expense. All accessible points shall be kept closed when not

installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the Engineer of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200 pound (90 kg) test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet (1.5 m).

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4 inch (6 mm) sieve.

Flowable backfill may alternatively be used The Contractor shall ascertain the type of soil or rock to be excavated before bidding.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the Engineer. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings.

The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet (60 cm).

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the Engineer, the unsuitable material shall be removed and replaced with suitable material. Alternatively, additional duct bank supports that are adequate and stable shall be installed, as approved by the Engineer.

All excavation shall be unclassified and shall be considered incidental to the respective L-110 pay item of which it is a component part. Dewatering necessary for duct installation, erosion and turbidity control, per Federal, state, and local requirements is incidental to its respective pay item as a part of Item L-110. The cost of all excavation regardless of type of material encountered, shall be included in the unit price bid for the L-110 Item.

Unless otherwise specified, excavated materials that are deemed by the Engineer to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the Engineer and compacted

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables) cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

b. Trenching, etc., in cable areas shall then proceed with approval of the Engineer, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 Duct banks (not used). Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches (0.5 m) below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches (0.5 m) below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet (1 m) beyond the edges of the pavement or 3 feet (1 m) beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches (75 mm) thick prior to its initial set. The Contractor shall space the conduits not less than 3 inch (75 mm) apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches (75 mm) thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the Engineer for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot (1.5-m) intervals.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, 8 inches (200 mm) minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch (75-mm) wide tape only for single conduit runs. Utilize the 6-inch (150-mm) wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches (600 mm) in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the Engineer shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the Engineer.

110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches (150 mm) nor more than 12 inches (300 mm) wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits

without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches (100 mm) thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4 inch (6 mm) sieve. The bedding material shall be tamped until firm.

Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches (0.5 m) below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches (60 cm) below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and lot less than 6 inches (150 mm) apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the Engineer for review prior to use.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet (60 cm) square and 4 - 6 inches (100 - 150 mm) thick extending approximately one inch (25 mm) above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet (61 m) along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the Engineer, for a neat, professional appearance.

All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the Engineer. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the Engineer. The letters shall be 4 inches (100 mm) high and 3 inches (75 mm) wide with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, 8 inches (200 mm) of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted except that material used for back fill shall be select material not larger than 4 inches (100 mm) in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the Engineer.

110-3.6 Backfilling for duct banks (not used). After the concrete has cured, the remaining trench shall be backfilled and compacted except that the material used for backfill shall be select material not larger than 4 inches (100 mm) in diameter., where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet (76 m) of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the Engineer.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include sodding, topsoiling, fertilizing, liming, seeding, sprigging, or mulching as shown on the plans. The Contractor shall be held responsible for maintaining all

disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

METHOD OF MEASUREMENT

110-4.1 All airport underground electrical duct bank and conduit work in this project is incidental to gate installation. No separate measurement will be made for duct bank and conduit work. Refer to Specifications Section F-162 for fence requirements and Section L-128 for gate operator requirements.

BASIS OF PAYMENT

110-5.1 All airport underground electrical duct bank and conduit work in this project is incidental to gate installation. No separate payment will be made for duct bank and conduit work. Refer to Specifications Section F-162 for fence requirements and Section L-128 for gate operator requirements.

MATERIAL REQUIREMENTS

Advisory Circular (AC) 150/5340-30
Design and Installation Details for Airport Visual Aids

AC 150/5345-53 Airport Lighting Equipment Certification Program

ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3))

ASTM D2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

ASTM D2922 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

NFPA-70 National Electrical Code (NEC)

Underwriters Laboratories Standard 6
Electrical Rigid Metal Conduit - Steel

Underwriters Laboratories Standard 514B
Conduit, Tubing, and Cable Fittings

Underwriters Laboratories Standard 514C
Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers

Underwriters Laboratories Standard 1242
Electrical Intermediate Metal Conduit Steel

Underwriters Laboratories Standard 651
Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings

Underwriters Laboratories Standard 651A
Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110

Item L-100 Automatic Gate Electrical Work

DESCRIPTION

100-1.1 This item shall consist of the electrical work necessary for proper connection to and operation of automatic gate operators, including card reader access control. It includes all associated materials such as wiring, cable, conduit, circuit breakers, pull boxes and grounding systems, as shown on the Contract Drawings or specified herein. This item shall also include marking and labeling of equipment, labeling or tagging of wire, the testing of the installations and furnishing all incidentals necessary to place all equipment in operating condition as a completed unit to the satisfaction of the Engineer.

100-1.2 Refer to Specifications Section F-162 for chain link fence requirements and Section L-128 for mechanical gate operator and control requirements.

EQUIPMENT AND MATERIALS

100-2.1 GENERAL. Power distribution equipment and communication equipment shall be as scheduled, as shown on the Contract Drawings and in accordance with the Supplemental Specifications.

100-2.2 CONCRETE. Plain and reinforced concrete shall conform to the requirements of specification Caltrans 90.

100-2.3 CONDUIT. Conduit shall be in accordance with Supplemental Specifications section 260543 – "Underground Ducts and Raceways for Electrical Systems."

100-2.4 PULL BOXES. Pull boxes shall be NEMA 1 where shown or required, size shall be per NEC requirements and as manufactured by Hoffman or an approved equal.

100-2.5 WIRE. Wire shall be in accordance with Supplemental Specifications section 260519 – "Low-Voltage Electrical Power Conductors and Cables." Multiple conductor cable shall have an overall jacket. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

100-2.6 CONTROL WIRE. Wire shall be not less than No. 12 AWG stranded copper THWN or THHN and shall be insulated for 600 volts unless otherwise on the Contract Drawings.

100-2.7 OTHER ELECTRICAL EQUIPMENT. Switches, cutouts, relays, terminal blocks, circuit breakers and all other regularly used commercial items of electrical equipment not covered by Federal Aviation Administration equipment specifications shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers or the National Electrical Manufacturers Association. When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the Proposal and Plans.

100-2.8 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS. Materials shall be in accordance with Supplemental Specification Section 260526.

100-2.9 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS. Materials shall be in accordance with Supplemental Specification Section 260529.

INSTALLATION

100-3.1 GENERAL. Provide all conduit, cables, wires, grounds, and pull boxes necessary for proper connection to and operation of automatic gate operators, as specified herein and as shown on the Contract Drawings.

Equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction.

Installation of low-voltage electrical power conductors and cables shall be in accordance with Supplemental Specification Section 260519.

Installation of grounding and bonding for electrical systems shall be in accordance with Supplemental Specification Section 260526.

Installation of hangers and supports for electrical systems shall be in accordance with Supplemental Specification Section 260529.

Installation of raceways and boxes for electrical systems shall be in accordance with Supplemental Specification Section 260533.

Installation of underground ducts and raceways for electrical systems shall be in accordance with Supplemental Specification Section 260543.

Installation of identification for electrical systems shall be in accordance with Supplemental Specification Section 260553.

Installation of wiring devices shall be in accordance with Supplemental Specification Section 262726.

100-3.2 CONDUIT. Conduit types, sizes and locations shall be as shown on the Contract Drawings and details.

Corrosion resistant steel or malleable iron shall be used to support conduit.

Installation of direct buried conduit shall be in accordance with Supplemental Specification Section 260543.

100-3.3 WIRING AND CONNECTIONS. The Contractor shall make all necessary electrical connections in accordance with equipment manufacturer instructions. In wiring to the terminal blocks, the Contractor shall leave sufficient extra length on each control lead to make future

changes in connections at the terminal block. This shall be accomplished by running each control lead the longest way around the box to the proper terminal. Leads shall be neatly laced in place.

100-3.4 MARKING AND LABELING. All equipment, control wires, terminal blocks, etc., shall be tagged, marked or labeled as specified below:

A. **Wire Identification.** The Contractor shall furnish and install wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks. Wire labels, if used, shall be of the self-sticking, preprinted type and of the manufacturer's recommended size for the wire involved. Identification markings designated on the Plans shall be followed. Tags, if used, shall be of fiber not less than 3/4-inch in diameter and not less than 1/32-inch thick. Identification markings designated on the Plans shall be stamped on tags by means of small tool dies. Each tag shall be securely tied to the proper wire by a non-metallic cord.

B. **Labels.** The Contractor shall stencil identifying labels on the cases of breakers and distribution and control relay cases with white oil paint as designated by the Engineer. The letters and numerals shall be not less than 1-inch in height and shall be of proportionate width. The Contractor shall also mark the correct circuit designations in accordance with the wiring diagram on the terminal marking strips which are a part of each terminal block.

100-3.5 CONCRETE. Concrete handling and placement shall be in accordance with specification Caltrans 90.

METHOD OF MEASUREMENT

100-4.1 Electrical installations of automatic gate operators and card readers, including all electrical work necessary for proper connection and operation to the satisfaction of Owner and Engineer and all work involving existing branch circuit panels in vault buildings, are incidental to gates as specified in section F-162.

BASIS OF PAYMENT

100-5.1 Electrical installations of automatic gate operators, including all electrical work necessary for proper connection and operation to the satisfaction of Owner and Engineer and all work involving existing branch circuit panels in vault buildings, are incidental to gates as specified in section F-162. No separate payment will be made for gate operator or card reader electrical work.

SUBMITTALS AND CERTIFICATIONS

100-6.1 The following "Shop and Setting Drawings", "Working Drawings", Catalogue Data" and "Certifications" shall be submitted for review:

- Catalogue Data and Certification showing that rigid galvanized steel conduit meets the requirements specified.
- Catalogue Data and Certification showing that PVC coated conduit meets the requirements specified.

- Catalogue Data and Certification showing that plastic conduit meets the requirements specified.
- Catalogue Data and Certification showing that pull boxes meet the requirements specified.
- Catalogue Data and Certification showing that wire meets the requirements specified.
- Catalogue Data and Certification showing that control wire meets the requirements specified.
- Catalogue Data and Certification showing that switches, cutouts, relays, terminal blocks, circuit breakers and other regularly used items meet the requirements specified.

END OF ITEM L-100

SECTION 260519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Building wires and cables rated 2000 V and less.
2. Connectors, splices, and terminations rated 2000 V and less.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: Indicate type, use, location, and termination locations.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer's authorized service representative.

B. Field quality-control reports.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

C. Comply with UL 1277, UL 1685, and NFPA 70 for Type TC-ER cable used in VFC circuits.

D. Conductors: Copper, complying with NEMA WC 70/ICEA S-95-658. Aluminum conductors are not acceptable.

1. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THHN/THWN-2.

2.2 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Exposed Branch Circuits, Including in Crawlspaces: Type THHN/THWN-2, single conductors in raceway.

B. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway.

C. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN/THWN-2, single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or higher mechanical strength and insulation ratings than conductors that are not spliced.

3.5 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 FIELD QUALITY CONTROL

A. Perform the following tests and inspections with the assistance of a factory-authorized service representative:

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.

2. Perform each of the following visual and electrical tests:

    a. Compare conductor and cable data with Drawings and Specifications.
    b. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
    c. Test bolted connections for high resistance using one of the following:

        1) A low-resistance ohmmeter.
        2) Calibrated torque wrench.
        3) Thermographic survey.

    d. Inspect compression applied connectors for correct cable match and indentation.
    e. Inspect for correct identification.

f. Inspect cable jacket and condition.
g. Perform insulation-resistance test on each conductor with respect to ground and adjacent conductors. Apply a potential of 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable for a one-minute duration.
h. Continuity test on each conductor and cable.
i. Uniform resistance of parallel conductors.

B. Cables will be considered defective if they do not pass tests and inspections.

C. Prepare Test and Inspection Reports: Prepare a written report to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

SECTION 260526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes grounding and bonding systems and equipment.

B. Section includes grounding and bonding systems and equipment, plus the following special applications:

1. Underground distribution grounding.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. As-Built Data: Plans showing dimensioned as-built locations of grounding features specified in "Field Quality Control" Article.

B. Qualification Data: For testing agency and testing agency's field supervisor.

C. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1. Instructions for periodic testing and inspection of grounding features at test wells and ground rings.

a. Tests shall determine if ground-resistance or impedance values remain within specified maximums, and instructions shall recommend corrective action if values do not.
b. Include recommended testing intervals.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Certified by NETA.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Framatome Connectors International (www.fciconnect.com)

B. Erico International Corporation (www.erico.com)

C. Thomas and Betts (www.tnb.com)

D. Dottie (www.ihdottie.com)

E. Ideal Industries (www.idealindustries.com)

2.2 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.3 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.4 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

C. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

D. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

E. Conduit Hubs: Mechanical type, terminal with threaded hub.

F. Ground Rod Clamps: Mechanical type, copper or copper alloy, terminal with hex head bolt.

G. Lay-in Lug Connector: Mechanical type, copper rated for direct burial terminal with set screw.

H. Service Post Connectors: Mechanical type, bronze alloy terminal, in short- and long-stud lengths, capable of single and double conductor connections.

I. Signal Reference Grid Clamp: Mechanical type, stamped-steel terminal with hex head screw.

J. Straps: Solid copper, copper lugs. Rated for 600 A.

K. U-Bolt Clamps: Mechanical type, copper or copper alloy, terminal listed for direct burial.

2.5 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel; minimum 5/8 inch diameter by 8 feet long.

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

B. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. Comply with IEEE C2 grounding requirements.

B. Grounding Hand holes: Install a driven ground rod through hand hole floor, close to wall, and set rod depth so 4 inches will extend above finished floor.

3.3 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Feeders and branch circuits.
2. Single-phase motor and appliance branch circuits.

3.4 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.

C. Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.

D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections with the assistance of a factory-authorized service representative.

B. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells and at individual ground rods. Make tests at ground rods before any conductors are connected.

    a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    b. Perform tests by fall-of-potential method according to IEEE 81.

4. Prepare dimensioned Drawings locating each test well, ground rod and ground-rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

C. Grounding system will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

E. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.

F. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

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SECTION 260529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hangers and supports for electrical equipment and systems.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Signed and sealed by a qualified professional engineer. For fabrication and installation details for electrical hangers and support systems.

C. Delegated-Design Submittal: For hangers and supports for electrical systems.

1. Include design calculations and details of trapeze hangers.

1.3 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Seismic Qualification Certificates: For hangers and supports for electrical equipment and systems, accessories, and components, from manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Thomas & Betts Corporation (Kindorf and Superstrut): www.tnb.com.

B. Hilti Corporation: www.hilti.com.

C. Unistrut Corporation: www.unistrut.com.

D. Power Engineering Co. Inc. (Power Strut): www.powerstrut.com.

E. Cooper B-Line: www.b-line.com.

F. Erico (Caddy and Pipe Pier): www.erico.com

2.2 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Comply with MFMA-4 factory-fabricated components for field assembly.

1. Material: Stainless Steel, Grade 304.
2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
3. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
4. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
5. Channel Dimensions: Selected for applicable load criteria.

B. Conduit and Cable Support Devices: Stainless-steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

C. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be made of malleable iron.

D. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened Portland Cement Concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

2. Mechanical-Expansion Anchors: Insert-wedge-type, stainless steel, for use in hardened Portland Cement Concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: Stainless-steel springhead type.
7. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems unless requirements in this Section are stricter.

B. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMTs, IMCs, and RMCs as required by NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

D. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with two-bolt conduit clamps.

E. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

C. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements.

D. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.

B. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 PAINTING

A. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 260529

SECTION 260533

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal conduits, tubing, and fittings.
2. Nonmetal conduits, tubing, and fittings.
3. Boxes, enclosures, and cabinets.
4. Handholes and boxes for exterior underground cabling.

B. Related Requirements:

1. Section 260543 "Underground Ducts and Raceways for Electrical Systems."

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Metal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. GRC: Comply with ANSI C80.1 and UL 6.

C. EMT: Comply with ANSI C80.3 and UL 797.

D. FMC: Comply with UL 1; aluminum.

E. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

F. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.

1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.
2. Fittings for EMT:

a. Material: Steel.
b. Type: compression.

3. Expansion Fittings: PVC or steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.
4. Coating for Fittings for PVC-Coated Conduit: Minimum thickness of 0.040 inch, with overlapping sleeves protecting threaded joints.

G. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.2 NONMETALLIC CONDUITS, TUBING, AND FITTINGS

A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. ENT: Comply with NEMA TC 13 and UL 1653.

C. RNC: Schedule 40 PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.

D. LFNC: Comply with UL 1660.

E. Continuous HDPE: Comply with UL 651B.

F. Coilable HDPE: Preassembled with conductors or cables, and complying with ASTM D 3485.

G. Fittings for ENT and RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.

H. Fittings for LFNC: Comply with UL 514B.

2.3 BOXES, ENCLOSURES, AND CABINETS

A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, aluminum, Type FD, with gasketed cover.

D. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.

E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

F. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum with gasketed cover.

G. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

H. Device Box Dimensions: 4 inches square by 2-1/8 inches deep.

2.4 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. General Requirements for Handholes and Boxes:

1. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
2. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.

1. Standard: Comply with SCTE 77.
2. Configuration: Designed for flush burial with bottom as indicated on plans.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC."
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed Conduit: GRC.
2. Concealed Conduit, Aboveground: EMT.
3. Underground Conduit: RNC, schedule 40 PVC, direct-buried.

B. Indoors: Apply raceway products as specified below unless otherwise indicated.

1. Exposed, Not Subject to Physical Damage: EMT.
2. Exposed, Not Subject to Severe Physical Damage: EMT.

3. Concealed in Ceilings and Interior Walls and Partitions: EMT.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
5. Damp or Wet Locations: GRC.

C. Minimum Raceway Size: 1/2-inch trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
3. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10.
4. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

E. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.

F. Install surface raceways only where indicated on Drawings.

G. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F.

3.2 INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

C. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

D. Arrange stub-ups so curved portions of bends are not visible above finished slab.

E. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

F. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

G. Support conduit within 12 inches of enclosures to which attached.

H. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

I. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

J. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

K. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch trade size and insulated throat metal bushings on 1-1/2-inch trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

L. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

M. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 72 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

N. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

O. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a rain-tight connection between the box and cover plate or the supported equipment and box.

P. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

Q. Locate boxes so that cover or plate will not span different building finishes.

R. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

S. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit.
2. Install backfill.
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.
4. Install manufactured duct elbows for stub-up at poles and equipment and at building entrances through floor unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.

    a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete for a minimum of 12 inches on each side of the coupling.
    b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60 inches from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.

6. Underground Warning Tape: Comply with requirements in Section 260553 "Identification for Electrical Systems."

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.

D. Install handholes with bottom below grade and below frost line.

E. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes

for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533

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SECTION 260543

UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Direct-buried conduit.
2. Handholes and boxes.

1.2 ACTION SUBMITTALS

A. Product Data: For conduits, handholes, and boxes, and their accessories.

B. Shop Drawings:

1. Factory-Fabricated Handholes and Boxes Other Than Precast Concrete:

a. Include dimensioned plans, sections, elevations, accessory locations, and fabrication and installation details.
b. Include duct entry provisions, including locations and duct sizes.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer and testing agency responsible for testing nonconcrete handholes and boxes.

B. Source quality-control reports.

C. Field quality-control reports.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

1.5 FIELD CONDITIONS

A. Ground Water: Assume ground-water level is 36 inches below ground surface unless a higher water table is noted on Drawings.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR DUCTS AND RACEWAYS

A. Comply with ANSI C2.

2.2 CONDUIT

A. RNC: NEMA TC 2, Type EPC-40-PVC, UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B.

2.3 HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

A. General Requirements for Handholes and Boxes: Comply with SCTE 77. Comply with tier requirements in "Underground Enclosure Application" Article.

1. Color: Gray.
2. Configuration: Units shall be designed for flush burial and have open bottom unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC."
6. Handholes 12 inches wide by 24 inches long and larger shall have factory-installed inserts for cable racks and pulling-in irons.

2.4 INSTALLATION OF HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting ducts, to minimize bends and deflections required for proper entrances. Use box extension if required to match depths of ducts, and seal joint between box and extension as recommended by manufacturer.

B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas and traffic ways, set cover flush with finished grade. Set covers of other handholes 1 inch above finished grade.

D. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in enclosure.

E. Field cut openings for ducts and conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

2.5 GROUNDING

A. Ground underground ducts and utility structures according to Section 26 05 26 "Grounding and Bonding for Electrical Systems."

2.6 FIELD QUALITY CONTROL

A. Perform the following tests and inspections and prepare test reports:

1. Demonstrate capability and compliance with requirements on completion of installation of underground ducts and utility structures.
2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide a minimum 6-inch-long mandrel equal to 80 percent fill of duct. If obstructions are indicated, remove obstructions and retest.
3. Test manhole and handhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 26 05 26 "Grounding and Bonding for Electrical Systems."

B. Correct deficiencies and retest as specified above to demonstrate compliance.

END OF SECTION 260543

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SECTION 260553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with ASME A13.1 and IEEE C2.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

2.2 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage.

2.3 LABELS

A. Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

B. Self-Adhesive Labels:
   1. Preprinted, 3-mil-thick, vinyl flexible label with acrylic pressure-sensitive adhesive.
   2. Vinyl, thermal, transfer-printed, 3-mil-thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

      a. Nominal Size: 3.5-by-5-inch.

2.4 TAPES AND STENCILS:

A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mils thick by 1 to 2 inches wide; compounded for outdoor use.

C. Floor Marking Tape: 2-inch-wide, 5-mil pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.

D. Underground-Line Warning Tape

   1. Tape:

      a. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
      b. Printing on tape shall be permanent and shall not be damaged by burial operations.
      c. Tape material and ink shall be chemically inert and not subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.

   2. Color and Printing:

      a. Comply with ANSI Z535.1, ANSI Z535.2, ANSI Z535.3, ANSI Z535.4, and ANSI Z535.5.
      b. Inscriptions for Red-Colored Tapes: "ELECTRIC LINE, HIGH VOLTAGE"

2.5 Tags

A. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

B. Nonmetallic Preprinted Tags: Polyethylene tags, 0.015 inch thick, color-coded for phase and voltage level, with factory printed permanent designations; punched for use with self-locking cable tie fastener.

C. Write-On Tags:
   1. Polyester Tags: 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to raceway, conductor, or cable.
   2. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
   3. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.6 Signs

A. Baked-Enamel Signs:

   1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
   2. 1/4-inch grommets in corners for mounting.
   3. Nominal Size: 7 by 10 inches.

B. Metal-Backed Butyrate Signs:

   1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396-inch galvanized-steel backing and with colors, legend, and size required for application.
   2. 1/4-inch grommets in corners for mounting.
   3. Nominal Size: 10 by 14 inches.

C. Laminated Acrylic or Melamine Plastic Signs:

   1. Engraved legend.
   2. Thickness:

      a. For signs up to 20 sq. inches, minimum 1/16-inch.
      b. For signs larger than 20 sq. inches, 1/8 inch thick.
      c. Engraved legend with black letters on white face.
      d. Self-adhesive.
      e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.7 CABLE TIES

A. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch.
2. Tensile Strength at 73 deg F according to ASTM D 638: 12,000 psi.
3. Temperature Range: Minus 40 to plus 185 deg F.
4. Color: Black, except where used for color-coding.

B. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch.
2. Tensile Strength at 73 deg F according to ASTM D 638: 12,000 psi.
3. Temperature Range: Minus 40 to plus 185 deg F.
4. Color: Black.

C. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, self-locking.

1. Minimum Width: 3/16 inch.
2. Tensile Strength at 73 deg F according to ASTM D 638: 7000 psi.
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F.
5. Color: Black.

2.8 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

B. Apply identification devices to surfaces that require finish after completing finish work.

C. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

D. Attach plastic raceway and cable labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.

E. Cable Ties: For attaching tags. Use general-purpose type, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. In Spaces Handling Environmental Air: Plenum rated.

F. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway at 6 to 8 inches low finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches overall.

3.2 IDENTIFICATION SCHEDULE

A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits, More Than 30 A and 120 V to Ground: Identify with self-adhesive vinyl label. Install labels at 10-foot maximum intervals.

B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels containing the wiring system legend and system voltage. System legends shall be as follows:

1. "POWER."

C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase-and Voltage-Level Identification, 600 V or Less: Use industry standard colors for ungrounded feeder and branch-circuit conductors.

a. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

D. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive vinyl labels with the conductor or cable designation, origin, and destination.

E. Control-Circuit Conductor Termination Identification: For identification at terminations, provide self-adhesive vinyl labels with the conductor designation.

F. Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.

G. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
2. Use system of marker-tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

H. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.

1. Limit use of underground-line warning tape to direct-buried cables.
2. Install underground-line warning tape for direct-buried cables and cables in raceways.

I. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

J. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.

1. Labeling Instructions:

a. Indoor Equipment: Self-adhesive label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high.
b. Outdoor Equipment: Engraved, laminated acrylic or melamine label 4 inches high.
c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
d. Unless labels are provided with self-adhesive means of attachment, fasten them with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

END OF SECTION 260553

SECTION 262726

WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Toggle switches.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

2.2 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, voltage and horsepower rating as indicated on plans.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors to remain:

    a. Cut back and pigtail, or replace all damaged conductors.
    b. Straighten conductors that remain and remove corrosion and foreign matter.
    c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

C. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

3.2 FIELD QUALITY CONTROL

A. Test Instruments: Use instruments that comply with UL 1436.

B. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

C. Perform the following tests and inspections with the assistance of a factory-authorized service representative:

1. Tests for Toggle Switches:

a. Line Voltage: Acceptable range is 208 to 250 V.
b. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
c. Ground Impedance: Values of up to 2 ohms are acceptable.
d. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

D. Wiring device will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

END OF SECTION 262726

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